Doctors of the World/USA
Maternal and Infant Health Project
1998-2002
Final Report

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A. Executive Summary

In 1998, Doctors of the World was awarded a grant by USAID to develop the maternal and infant health (MIH) infrastructure in Kosovo. The project faced the following initial challenges: a delay in project start-up due to interference by Yugoslav authorities and two evacuations of staff from Kosovo for security reasons; the need to completely revamp the project due to changed circumstances after the war; and the resultant compressed time frame for project implementation. Despite these challenges, Doctors of the World has made a significant positive impact on the provision of MIH care in Kosovo and, following project completion, is continuing to address MIH issues with the support of other donors.

The overall goal of the project was to reduce maternal and infant morbidity and mortality in Kosovo. This goal would be achieved by increasing reproductive health knowledge and utilization among consumers; addressing poor health infrastructure; improving the skills of health providers in primary, secondary and tertiary health facilities (Health Houses, Regional Hospitals and a Reference Hospital); and creating a knowledge base of maternal and infant health status and health service outcomes.

After redesign following the Kosovo crisis, the project consisted of the following specific components, each of which is described fully in the report:

I) Design and implementation of a comprehensive labor and delivery database and a maternal outcomes database**;**
II) Establishment of a health education resource center in Pristina Hospital to be used by health and non-health professionals as well as patients and their families.
III) Support for 10-12 community health centers to improve reproductive health services;
IV) Establishment of health information centers in all major Health Houses;
V) Training of trainers and direct provision of health education to Kosovar women;
VI) Improvement in access to reproductive health services in Serb areas through provision of consumables and training of 10 midwives and aides in Donja Gusterica and Gracanica Health Houses, and through direct care provision;
VII) Provision of clinical support for secondary and tertiary health care through side-by-side training; support for perinatal unit in Pristina Hospital (as the main reference hospital for complicated births).

In addition, through other matching funding sources, Doctors of the World undertook to:

VIII) Improve mother and child care in the extremely poor/socially isolated areas of the Pristina Region; support primary and secondary health centers providing maternal health care to the minority populations living in the Pristina Region; and improve access of minority communities of the Pristina region to secondary health centers; and
IX) Provide appropriate health education to encourage more Roma and Ashkalia people to effectively utilize reproductive health care services; and conduct training

and provide support for existing health facilities so they may provide more accepting and responsive services to the Roma and Ashkalia population.

While is impossible to ascertain a direct correlation between Doctors of the World activities and changes in maternal and infant morbidity and mortality, Doctors of the World can report the following results with respect to the aforementioned components:

I) Installation of sustainable comprehensive labor and delivery outcomes database in 7 locations, laying the groundwork for improved hospital record keeping and evidence-based public health decisions regarding reproductive health;

II) Establishment of properly equipped sustainable International Health Education Resource Centers in Pristina and Gjilan Hospitals, increasing access to medical literature for providers;

III) Through provision of equipment and consumables, substantial upgrade of services available in 16 health facilities, addressing emergency post-conflict needs, as well as longer term quality of care needs;

IV) Establishment of 15 sustainable Health Information Centers, which inform over 3500 visitors per month about pre- and post-natal topics and family planning and foster healthy reproductive and infant health;

V) Training of approximately 460 sustainable health educators in 8 rural municipalities, serving over 480 separate villages; over 8,000 members of the community already reached with reported significant positive changes in health behavior;

VI) Provision of needed OB/GYN care to approximately 220 minority women who lacked safe access to a secondary or tertiary care facility;

VII) Provision of 104 months of side-by-side training to Kosovar health professionals, in the following topics with the following results:

a. Danger of performing unnecessary episiotomies - 24% reduction in their use at Gjilan Hospital, and a 14% reduction at Prizren Hospital;
b. Importance of blood pressure monitoring - 40.6% increase in comprehensive blood pressure monitoring in Gjilan, a 24.94% increase in Prizren, a 7.94% increase in Ferizaj, a 31.58% increase in Rahovec, and a 22.88% increase in Suha Reka;
c. Importance of screening urine for protein in diagnosing hypertensive disorders - statistically significant increased practice of both in most sites exposed to side-by-side training;
d. BCG vaccination importance and technique - knowledge differences regarding two key areas of BCG administration of 40% and 50% in sites exposed to DOW training, as compared to control site;
e. Neonatal reanimation - knowledge differences from 3% to 43% in 4 out of 5 sites exposed to side-by-side training, as compared to control site;
f. Neonatal monitoring - increased practice of monitoring by at least 80% in all 3 DOW sites evaluated (as compared to the control).

In addition, under component VII:

a. complete reorganization of Gjilan Hospital Maternity, contributing to its designation as a Center of Excellence by UNFPA;
b. establishment of 3 antenatal clinics, which together see approximately 1000 women per month and provide and monitor antenatal care and health information;
c. provision of equipment and training to Prizren and Gjilan hospitals, with 50% and 36% decrease in perinatal mortality in Prizren and Gjilan Hospitals respectively, and a 68% and 79% decrease in early neonatal death rate respectively;

VIII) Provision of reproductive health care to 178 Roma and Ashkalia women; training of 80% of the midwives working in Donja Gusterica Health House in WHO antenatal care and labor and delivery protocols; successful lobbying for long-term solutions to gaps in two minority area health houses, including electricity and drug supply, provision of ultrasound machines, and sewage system repairs; transportation of 108 minority patients to secondary or tertiary care facilities;

IX) Gathering, collating, and dissemination to interested agencies of the first data regarding reproductive health status of Roma and Ashkalia in post war Kosovo; training of 37 Roma/Ashkalia female and male Peer Health Educators who have in turn trained 626 members (18%) of their own communities; creation of indigenous Health Committees in all project sites and commencement of training in health advocacy.

While Doctors of the World achieved significant gains in the quality of MIH services delivered in Kosovo, there were a number of deficiencies that are instructive for future work. Provision of equipment was not always properly coordinated by NGOs or the recipient facilities, and the lack of maintenance resources limited the utility of some equipment provided by Doctors of the World. There was occasional duplication of NGO resources in creation of training curricula. Doctors of the World did not always have a coordinated advocacy and policy-making strategy or role with regard to the U.N. Mission in Kosovo (UNMIK) and other UN agencies. The rigid hierarchy among doctors, nurses and midwives sometimes limited the effectiveness of Doctors of the World training. Data collection gaps (at all levels, including intra-project) during the course of the project made evaluation difficult.

During the course of its work in Kosovo, Doctors of the World identified a number of issues adversely affecting the provision of MIH services that require systemic intervention by U.N. and governmental authorities:

1. Continuing improvement in clinical practice will require a political and financial commitment from UNMIK and the newly formed Ministry of Health for: systems to evaluate the clinical skills of those in leadership positions within hospitals; guidelines regarding institution of evidence-based practice and documentation; and systems to ensure provider and facility accountability for deficiencies in practice.

2. The need for parallel health services for minorities will only be eliminated if UNMIK and the government take more forceful measures against discrimination in access to health care services.
3. The low salary scale for health professionals and the consequent practice of charging under the table for services has a disproportionate impact on the most vulnerable members of Kosovo society. Covert payments or "referrals" to private care must be eliminated, fees for services made transparent, and health care professionals provided with a living wage that reduces the need for unethical practices.
4. UNMIK and the government must ensure that clear policies and procedures related to the procurement of medical equipment and consumables exist and are communicated to health facility administrators.
5. Government health authorities must continue to build on the data collection foundation that DOW has established. This can be done at minimal cost, but requires political will.
6. Additional resources need to be provided to antenatal and postnatal care.
7. A sustainable system for emergency transport to health facilities needs to be established.
8. U.N. and government authorities need to foster policies and procedures that enhance respect for women's dignity and rights, by ensuring informed consent to treatment, the opportunity to have family members present during the birth process, and the availability of appropriate palliative care.
9. U.N. and government authorities need to foster integration amongst institutions providing MIH care, in order to lessen competition and ensure progress toward the common goal of reducing maternal and infant morbidity and mortality.

B. Glossary

Antenatal/Prenatal Care:
The regular health care women should receive during pregnancy from an obstetrician or midwife.

Early Neonatal Death:
Death of a liveborn infant occurring less than 7 completed days (168 hours) from the time of birth.

Episiotomy:
A surgical procedure for widening the outlet of the birth canal to facilitate delivery of the baby and to avoid a jagged rip of the perineum (perineal rupture).

Hypertension:
Persistently high arterial blood pressure. Hypertension may have no known cause (essential or idiopathic hypertension) or be associated with other primary diseases (secondary hypertension).

Infant Mortality:
The death of an infant before his or her first birthday.

Late Neonatal Death:
Death of a liveborn infant occurring after 7 completed days of age but before 28 completed days.

Maternal Mortality:
Maternal deaths resulting from complications of pregnancy and childbirth in a given population.

Morbidity:
A diseased condition or state, the incidence of a disease or of all diseases in a population.

Perinatal Mortality:
Mortality around the time of birth, conventionally limited to the period from 28 weeks gestation to one week postnatal.

Perineal Rupture:
Forcible tearing of the area between the anus and the vulva (the labial opening to the vagina) .

Postnatal Care:
The care provided to a woman following the birth of a child.

Pre-Eclampsia:

A condition in pregnancy characterized by abrupt hypertension (a sharp rise in blood pressure), albuminuria (leakage of large amounts of the protein albumin into the urine) and edema (swelling) of the hands, feet, and face. Pre-eclampsia is the most common complication of pregnancy. It affects about 5% of pregnancies. It occurs in the third trimester (the last third) of pregnancy.

Primiparous:
Denoting a primipara. An individual bearing a first offspring; an individual that has borne only one offspring.

Stillbirth:
The birth of an infant who has died prior to delivery.

Acronyms:

DOW:	Doctors of the World
IPH:	Institute of Public Health
KFOR:	Kosovo Force
L and D:	Labor and Delivery
MIH:	Maternal and Infant Health
MoH:	Ministry of Health
NGO:	Non-governmental Organization
OBGYN:	Obstetrician/Gynecologist
TOT:	Training of Trainers
UNFPA:	The United Nations Population Fund
UNICEF:	United Nations Children's Fund
UN:	United Nations
UNMIK:	United Nations Mission in Kosovo
WHO:	World Health Organization

It is important to note that all cities are referred to by the names most frequently used by the international community, which in some cases is the Serbian spelling, in some cases is the Albanian spelling, and, in some cases is a transliteration of either.

C. Introduction

The Maternal Infant Health Project (MIH), funded by USAID, was initiated by DOW in Kosovo in September of 1998 in response to high infant and maternal morbidity and mortality rates, particularly among the Albanian population who lacked equitable access to health services. Kosovo's autonomy was revoked by Milosevic in 1989, and the health system was placed under "emergency management" in 1990. Following this, many Albanian health providers lost their jobs, and many Albanian patients were either denied access to Serb dominated health services or felt uncomfortable accessing Serb providers. Thus, from 1989 to 1999, Albanians were primarily served by a parallel volunteer health system, and most Albanian health providers were poorly-equipped and lacked access to ongoing medical education. Many Albanian women delivered at home, and access to ante- or post-natal care services was almost non-existent. Data regarding the Serbian-led maternal and infant health services was unreliable and not applicable to the Albanian population.

Aside from the effects of Serb political domination, Kosovo, the poorest region of the Former Yugoslavia, had also long suffered from lack of financial and institutional support, negatively affecting basic public health infrastructure and indicators. Morbidity and mortality rates within the public and the parallel system were alarmingly high, with Kosovar physicians citing lack of antenatal care, poor nutrition, and lack of equipment and supplies as major causes.[1] In addition, the socialist system did not emphasize the connection of professional status or salary to productivity or accountability, meaning that incentive for increasing provider skill or knowledge level was lacking and that transparent procedures for decision making and management did not exist. Continuing education for health professionals, a practice considered necessary to ensure quality of care in the West, was not instituted. Doctors working in state run facilities routinely accepted payment for services and bribes to prioritize patients.[2] Furthermore, in Eastern Europe, doctors were the holders of information, and patients (and other health providers such as nurses and midwives) often did not have sufficient access to information about their (or their patient's) health status. This was especially true for vulnerable populations, such as Albanians, Roma, or women—who had the further burden of being considered "destined" to suffer through childbirth. Patients in Kosovo were thus non-participating "recipients" of health care, who were given little information about their health status or needs, and who were often treated as if they were dependent on doctors' beneficence for care. The legacy of all of these aforementioned problems continues today.

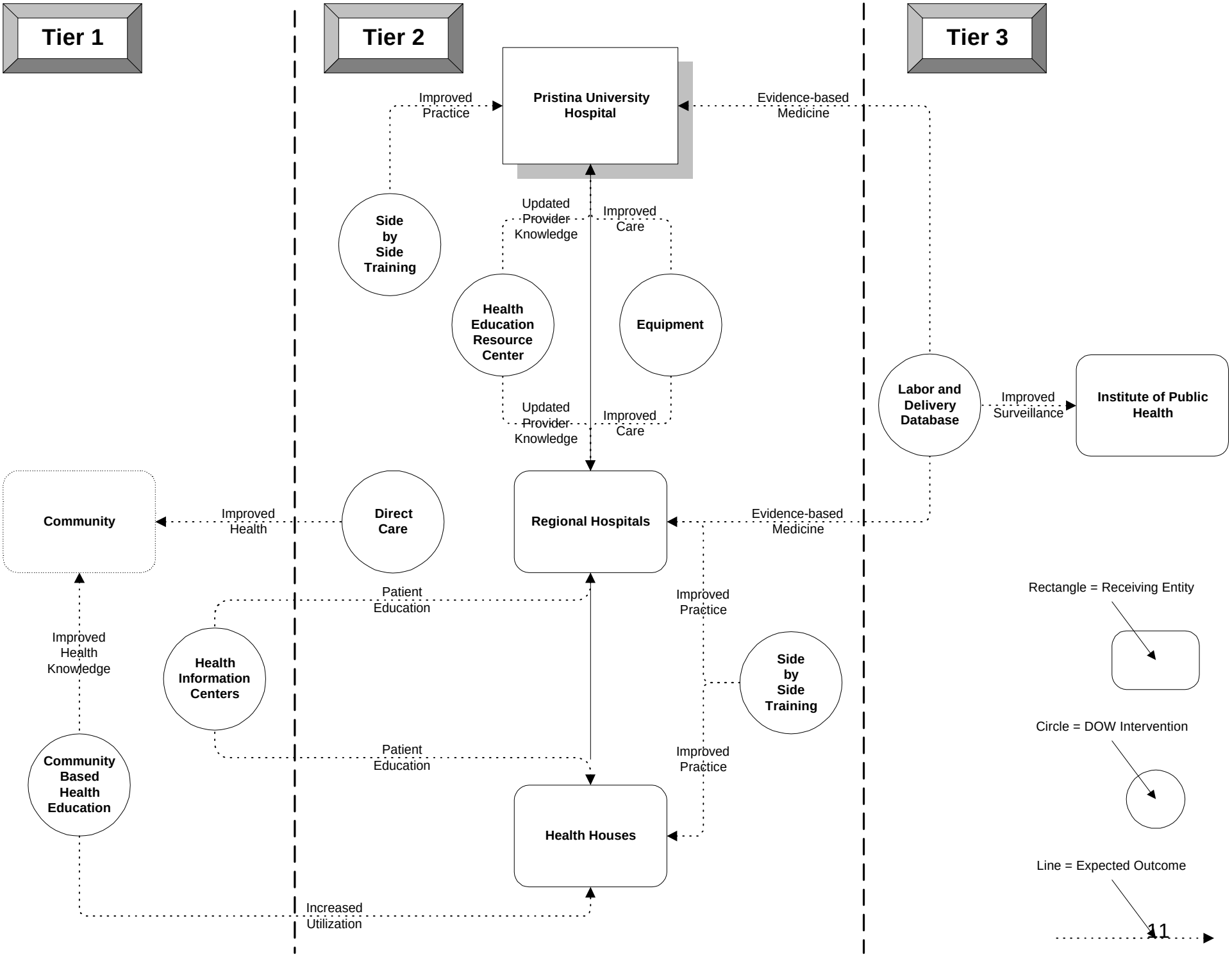
To improve the quality of maternal and infant health care provided in both the public and the parallel system and to address these gaps in health management, DOW developed the Maternal and Infant Health Project in September of 1998. However, the project ran into a number of obstacles which hindered progress. The first MIH project director was hired in fall of 1998 but not given a visa to enter the country by the then Serbian-led Yugoslav

[1] Open Wounds: Human Rights Abuses in Kosovo. Human Rights Watch, 1993.
[2] Ibid.

government. The growing conflict in 1999 led to interventions limited to certain areas of Kosovo for security reasons and then to multiple evacuations of staff, ending in complete evacuation for several months during the crisis of 1999. Upon return of DOW staff and beneficiaries to Kosovo, the project, which had been focused on support to the Albanian parallel health system, had to be refocused on rebuilding the MIH public health system, devastated by the crisis and 10 years of neglect. The project also had to take into account new vulnerable minority populations in Serbian and Roma/Ashkalia enclaves and communities.

Much of the remainder of 1999 and early 2000 was spent conducting baseline and infrastructure assessments and rewriting and re-orienting project objectives and activities. Due to lack of reliable MIH baseline data (as stated, Serbian data was unreliable for the Albanian population, the majority of whom gave birth at home), DOW's first goals of reducing maternal and infant mortality Kosovo-wide by 50% turned out to be unrealistic, and in June 2000, DOW negotiated with USAID to reduce this to 30%. In work-plans approved by USAID in October 2000 and in April 2001, objectives were further refined according to updated data about maternal and infant mortality and morbidity in Kosovo, focusing DOW interventions on the areas serving the most mothers (Pristina, Prizren and Gjilan) and on intermediate changes necessary to affecting an ultimate reduction in mortality and morbidity.

DOW developed a three-tiered approach to the overriding goal of reducing maternal and infant mortality. This approach, instituted by DOW in partnership with Kosovar health facilities and local organizations, is summarized in the following flow chart, which highlights expected outcomes.


Tier 1
Tier 2
Tier 3
Pristina University Hospital
Improved Practice
Evidence-based Medicine
Side by Side Training
Updated Provider Knowledge
Improved Care
Health Education Resource Center
Equipment
Updated Provider Knowledge
Improved Care
Labor and Delivery Database
Improved Surveillance
Institute of Public Health
Community
Improved Health
Direct Care
Regional Hospitals
Evidence-based Medicine
Patient Education
Improved Practice
Improved Health Knowledge
Health Information Centers
Side by Side Training
Patient Education
Improved Practice
Community Based Health Education
Health Houses
Increased Utilization
Rectangle = Receiving Entity
Circle = DOW Intervention
Line = Expected Outcome

As illustrated in the flowchart, to address informational gaps in the community, exacerbated by years of reduced access to health services, DOW set the objective of increasing reproductive health utilization and knowledge through training lay health educators in local organizations. To address poor health infrastructure, low clinical skill levels, and lack of management experience, all of which contributed to poor utilization of public health services by Albanian women, DOW set the objective of equipping and training health providers in primary, secondary and tertiary health facilities (Health House, Regional Hospital and Reference Hospital levels). To address critical gaps in surveillance and monitoring of maternal and infant health, which were factors in ongoing lack of accountability or employment of evidence-based medicine, DOW set the objective of conducting and participating in baseline studies as well as instituting a labor and delivery database system to be used in project, hospital and national level monitoring of maternal and infant health service outcomes.

Specific objectives outlined in work-plans were the following:

1) Community Health Education: Training members of local NGOs and women's and men's groups (such as the Center for Protection of Women and Children and the Mother Theresa Society) as lay trainers (ToT) to disseminate information in the community with the goal of boosting the usage of preventive services (such as pre and post-natal care) as well as professionally-assisted labor services;

2) Health House and Maternity-Based Labor and Delivery Services: Using side-by-side training implemented by international clinicians, to improve infrastructure and clinician skill level with the goal of reducing harmful practices and introducing evidence-based medicine, including: provision of essential life-saving equipment to all birth centers and maternities in the three largest hospitals (Pristina, Prizren and Gjilan); provision of training to midwives in basic obstetrics and neonatal care; establishment and maintenance of a Health Resource Center in Pristina Clinical Center, providing access for clinicians and patients to up-to-date medical literature and internet resources; and hospital-based side-by-side clinical training by expatriate clinicians (obstetricians, midwives and neonatologists), focused on instituting evidence-based medicine, WHO protocols and case review and referral systems;

3) Labor and Delivery Information Systems: Improving information systems with the goal of increasing reproductive health surveillance and upgrading clinical management via participation in assessments and establishment of baseline data; provision of logistical support to WHO and UNFPA; and design and establishment of a labor and deliveries outcome database in Pristina University Hospital.

In determining these objectives, DOW also relied on universally recognized public health standards for humanitarian interventions, such as:

- collaboration for capacity development must be based on effective local partnerships;
- changes in practice cannot simply be mandated, but must be instituted through new understandings grounded in realities of lived experience;

- external support agents must take the role of facilitator rather than director; and sustainable interventions entail the transfer of knowledge, skills and capacities in ways that enable target groups to make lasting changes in behavior, institutions and policies.

In addition, public health principles regarding reproductive health supported DOW objectives, including:

- improving women's access to reproductive health information increases service utilization;
- improving infrastructure and clinical skill level also increases service utilization by raising community trust in health services;
- improving infrastructure and clinical skill level improves treatment; improved treatment can be expected to result in improved outcomes among women treated;
- coupling increases in service utilization with improvements in information systems leads to increased tracking of service outcomes, eventually leading back to improved treatment.[3]

This evaluative final report thus undertakes an ambitious task – detailing activities and achievements of a multi-level project implemented over the course of an unstable period in Kosovo during which public health data was unreliably (if at all) kept.

The information contained in the report is based on an evaluation conducted at the end of the project by an MIH Technical Consultant, Jonathan Rose, MD, MPH as well as on information gathered for DOW reporting to the donor, USAID, over the life of the project. In the course of this evaluation, multiple field sites were visited to collect raw data; DOW documentation was reviewed at the headquarters, field office, and field site levels; and several studies were carried out in order to determine what has occurred and what measurable outcomes could be determined.

Where possible, the goal of the evaluation was to provide "meaningful results." In scientific terms, this means that results, conclusions, and associations were: obtained in a standardized and objective manner; contain a minimum of bias; are statistically significant; are a relevant reflection of the project; and are useful in making future programmatic decisions.

The studies done include a retrospective cohort study, several cross sectional surveys, an observational study, and others utilizing rapid appraisal techniques recommended by USAID for the acquisition of qualitative data. They include interviews, questionnaires, and standardized observations. Since this project has had such an emphasis on behavioral change and knowledge transfer ("capacity building"), these techniques provide the most efficient means of ascertaining the presence of a change in these areas. Data were then analyzed for descriptive statistics, statistical significance, and hypothesis testing, using standard biostatistical models.

[3] The Design and Evaluation of Maternal Mortality Programs. Maine D, Akalin M, Ward V, Kamara A. Center for the Population and Family Health, School of Public Health, Columbia University. (pg. 49) 1997.

The *Program Component Description and Evaluation* section presents activities and achievements in relation to the project objectives presented to USAID in work-plans submitted in October of 2000 and in the no-cost extension request of March 2001. It is important to note that **all** project activities (including those undertaken prior to the bombardment) corresponded to the initial goal of reducing maternal and infant morbidity and mortality in Kosovo.

Objectives relating to each sub-section of the *Program Component Description and Evaluation Section* are presented at the beginning of the section. Each section covers a project objective (e.g. provision of equipment, database development etc.), and explains the objective, the rationale for the objective, the activities undertaken toward that objective (including impact), any obstacles or modifications, the sustainability of the endeavor, and a bulleted summary of primary accomplishments. The *Obstacles and Modifications* section explains activity modifications and places where objectives were not achieved.

Side-by-side training is by far the largest part of the report, due to the fact that it comprised the bulk of the DOW intervention, and was the primary means for affecting Kosovar health service providers. It therefore was the component of the project expected to result in the most measurable and immediate impact (as opposed to community-based health education for example, which would increase access to health care services, resulting in less measurable change over a longer period of time).

Sites for the evaluative study summarized in the report were chosen because they were the places of greatest exposure to the MIH Project. Sample communities were chosen at random amongst those that have had community based education sponsored by DOW. Peja Hospital is included as a control because it is approximately the same size as Gjilan Hospital and has not had exposure to the DOW MIH Project (see figure EV-1).

4 Hospitals:	3 Health Houses:	4 Community Populations:
Gjilan Hospital	Farizaj Health House	Dragash
Prizren Hospital	Rahovec Health House	Rahovec
Pristina U. Hospital	Suha Reka Health House	Suha Reka
Peja Hospital		Kamenice

Figure EV-1.

Raw data for the evaluation was taken from the following sources:

- Health House Records (or monthly reports)
- Medical Records (of individual patients)
- Hospital Records (non-medical records)
- Patient Interviews
- Staff Interviews
- Observations
- Labor and Delivery Outcomes Database (created by DOW)
- DOW Field Office, Headquarters, and Field Site Records

D. Program Component Description and Evaluation

I. Labor and Delivery Outcomes Database

OBJECTIVE:

- ***Design and Implementation of a Comprehensive Labor and Delivery Database and a Maternal Outcomes Database—***
  The DOW initiated database in Pristina Hospital will be extended to all Kosovo Hospitals to produce a fully integrated self-generating reporting system, and a Maternal Outcomes database will be developed. DOW will work closely with the Kosovo Institute for Public Health and with administrators and practitioners at hospitals in setting up, analyzing and utilizing sustainable data collection systems regarding maternal and infant morbidity and mortality. Case review and tracking, together with review and analysis of risk factors contributing to morbidity and mortality, is of the highest importance. At the end of this project, an IPH data manager will be trained in managing maternal and infant data from all hospitals in Kosovo; select hospital clinical staff will understand and be able to utilize the data entry and data summary systems; hospital administrators and staff will have access to their hospitals' internal maternal and infant mortality and morbidity data system; and each hospital will electronically submit its internal reports to the IPH on a monthly basis.

RATIONALE:

In attempting to gather baseline data regarding maternal and infant morbidity and mortality in Kosovo, DOW became aware of the lack of established systems to gather data and the lack of analysis and reliability of data that did exist. Creating, installing, and training in the use of a labor and delivery outcomes database in close coordination with WHO and UNICEF initiatives would achieve several aims. Recording data regarding, for example, the frequency of certain delivery complications and maternal mortality would not only establish baseline data from which to measure improvement, but would also highlight connections and systemic problems. Encouraging regular data collection and analysis highlights the importance of accountability and evidence-based decision making two practices which DOW clinicians had identified as lacking in all health facilities. Moreover, the creation of surveillance systems to encourage evidence-based practice would dovetail with DOW side-by-side training efforts to encourage the same. For example, DOW clinicians would train in certain practices, such as skin-to-skin contact, and then point to data indicating decreased hypothermia rates to prove the efficacy of skin-to-skin. The creation of surveillance systems would address gaps in hospital level analysis, as well as province-wide analysis.

ACTIVITIES:

DOW developed a database recording labor and delivery outcomes in August of 2000. The database was installed in Pristina Hospital for a trial period and revised by a DOW

expatriate epidemiologist in September of 2001. Data fields record general patient data as well as labor and delivery outcomes, such as the presence or non-presence of particular complications. The database is also capable of producing a discharge paper.

Following the revision of the Pristina University Hospital Database, Doctors of the World staff developed an instruction manual, and installed the database in all regional hospitals (Gjilan, Pristina, Prizren, Peja, North Mitrovica, and Gjakova) as well as the health house with the highest number of births, Ferizaj Health House. Each of the seven facilities was provided with at least one computer and printer (two computers were provided in some cases). At least two staff from each facility were formally trained. This formal training and monthly monitoring, carried out from September 2001 to March 2002 (and additional on-site technical assistance as requested) increased staff skill and comfort with the software, enhancing data reliability.

By the end of September 2001, staff at Prizren, Gjilan, and Pristina Hospitals and Ferizaj Health House were capable of producing patient reports on demand as well as monthly aggregate data reports, and all sites had this capability by the end of the project. The database provides the raw material for proper epidemiological surveillance of labor and delivery outcomes, in turn fostering evidence-based, facility-wide decisions regarding quality of care, as well as public health policy decisions. Indeed, the DOW database is currently the primary data source in Kosovo for tracking trends in the quality of perinatal care.

OBSTACLES AND MODIFICATIONS:

According to the initial objective, facilities should forward monthly reports to the IPH. This does not consistently occur. Pristina Hospital in particular often does not report data to the IPH, making accurate macro data analysis difficult. In addition, while DOW has affected significant improvements in health facility staff understanding of the importance of timely, complete, and accurate data reporting, hospital management's continued commitment to these areas is key to future success. Indeed, Pristina Hospital frequently falls behind in data entry, which affected the integrity of MIH Project evaluation. Several intermediate indicators are only recorded in the DOW database, as opposed to other database systems, making data entry key to outcome analysis. In the case of some analyses included in this report, Pristina University Hospital is excluded as data there was not entered in a timely fashion.

DOW further intended to develop a maternal outcomes database. While the Labor and Delivery Outcomes Database encompasses some elements that would be recorded in such a database, many elements, including maternal mortality, are not recorded in the existing database. (This data, however, is recorded in a paper system and reported to the IPH). DOW elected not to develop the database as it became clear that DOW staff time and resources would best be dedicated to ensuring the smooth functioning of the Labor and Delivery Outcomes Database. As a computerized surveillance and analytic system is new for Kosovo, fostering understanding and commitment to the utility of such a system became the most immediate Doctors of the World priority.

While Doctors of the World has negotiated Labor and Delivery Database management with the Institute of Public Health, the IPH has yet to designate the responsible personnel (see S*ustainability* section). Moreover, while the IPH has agreed to assume responsibility for the database, DOW is unable to direct their analyses and priorities. IPH capacity is still being developed by other NGO and GO initiatives, and their understanding of the importance of analysis and accountability continues to evolve. Through ongoing projects, DOW continues to lobby for IPH to make policy changes based on data analyses, but is unable to ensure that this occurs.

SUSTAINABILITY:

The DOW expatriate epidemiologist visited all sites as well as relevant public bodies (IPH and WHO) to emphasize the importance of institutional commitment to database management. DOW explained the benefits of both the facility and the wider public health level of data analysis. DOW also laid the groundwork for hospital management responsibility for implementing the database, by agreeing with maternity directors that they would assign data managers, ensuring that staff fill out patient forms correctly, and managing any related issues. Furthermore, the Director of IPH agreed that a Labor and Delivery Outcomes Database Manager would be identified and funds made available to begin to maintain the database. All of these agreements were laid out in Memorandums of Understanding signed by DOW, the host facility, and the IPH.

Primary Achievements

- **Installed sustainable comprehensive labor and delivery outcomes database in 7 locations, laying the groundwork for improved hospital record keeping, evidence-based facility and Kosovo- wide public health decisions regarding reproductive health.**

II. International Health Education Resource Center

OBJECTIVE:

- *Establish a resource center in Pristina Hospital to be used by health and non-health professionals as well as patients and their families.*

RATIONALE:

Almost all Albanian ethnicity health professionals worked in a parallel health system from 1991 to 1999. Dependent on remittances from Albanians working abroad and from individual patients, these health professionals lacked access to updated medical information for almost a decade. Moreover, even prior to their exodus from the public system, Albanian care providers worked within a system that lacked sufficient funding and was plagued by poor infrastructure. The DOW MIH intervention thus included the creation of an International Health Education Resource Center in Pristina University Hospital. DOW aimed not only to provide health professionals with access to updated

medical information but also to strengthen the relationship between DOW and the Hospital. Approaching hospital staff as colleagues would reinforce the DOW emphasis on evidence-based medicine; DOW clinicians could approach their Kosovar counterparts as fellow scientists who would understand the importance of changing practice to improve outcomes.

ACTIVITIES:

DOW established an International Health Education Resource Center in Pristina University Hospital in January 2000. The Center contains 7 computer terminals with internet access, a digital and a video camera (to facilitate consultation with physicians abroad via internet), a television and VCR, a scanner, approximately 100 medical texts in English (primarily OBGYN), medical journals on CD-ROM, labor and delivery films, and a photocopy machine.

From January 2000 to March 2002, the Center was open from 3pm to 7pm daily (chosen for convenience of the Hospital physicians) and staffed by a resident paid by DOW.

Since the center opened, there have been 2000 visits to the IHERC. Obstetrician gynecologists, pediatricians, residents, other doctors (e.g. orthopedists, ENTs, etc.), nurses, and students all report using the center. Evaluation respondents reported the most frequent use of the center was to access e-mail (100% of respondents), literature searches (89% of respondents), or to browse medical journals or read text books (11% of respondents). The majority used the center from two to five times each week (see figure IHERC-1). Encouragingly, 30% of respondents reported using the video camera to engage in teleconferencing to obtain medical consultation from doctors in the United States or other countries.

at PUH

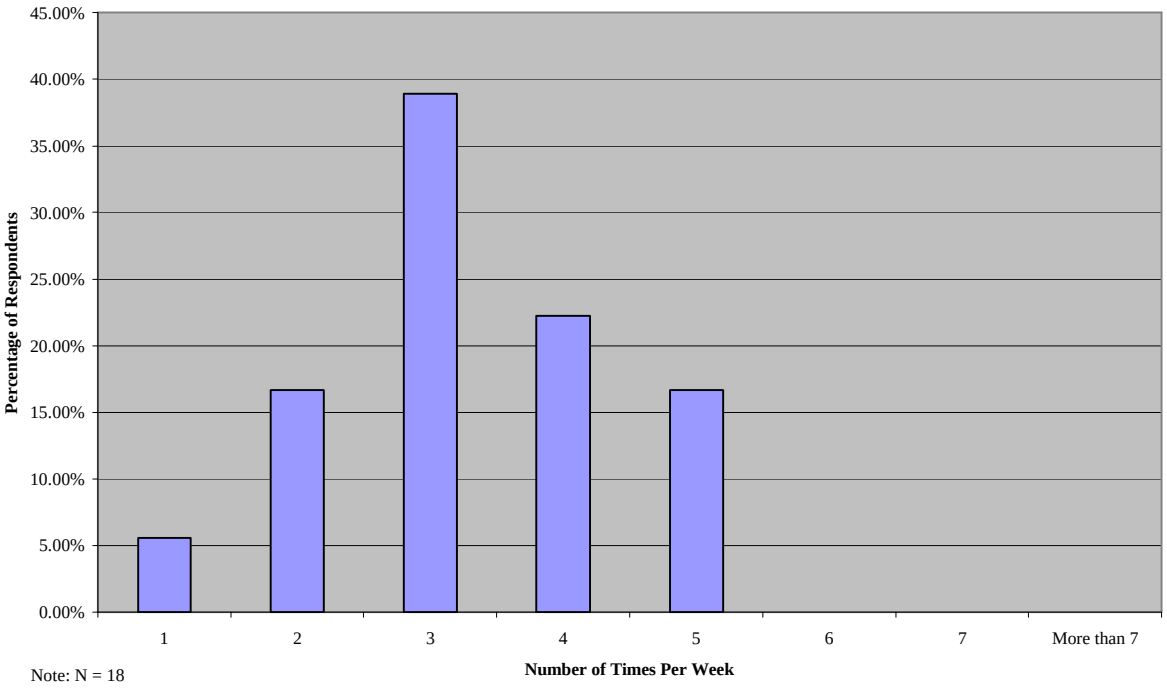


Fig. IHERC-1

OB/GYN	Other
2	16

1. Occupation

OB/GYN	Neonatologist	Pediatrician	Midwife	Nurse	Resident	Other doctor
1		1		1	3	11

2. Do you use the resource center

Yes	No
18	

3. What you use the resource center for

Email	Literature search	Browse medical journals/textbooks	Non- medical information	Other
18	16	2		
100.00%	88.89%	11.11%		

4. Number of times per week you use the resource center

1	2	3	4	5	6	7	More than 7
1	3	7	4	3			

5.56% 16.67% 38.89% 22.22% 16.67%

5. If you use the video or other camera, what do you use it for?

Video conferencing	Medical consultation within Kosovo	Medical consultation with the US	Medical consultation with another country	Fun
		4	2	

Given the popularity of the Center in Pristina, DOW elected to create an additional Center in Gjilan Hospital toward the end of the DOW intervention. This Center also further concretized the already strong relationship between DOW and Gjilan Hospital. The Center, inaugurated in March of 2002, includes a conference table, two computer terminals with internet access, approximately 50 medical texts in English and Serbian language, and CD-ROMs with medical journals. Data regarding Center usage is not available since it was opened at the end of the project timetable.

As intended, the Resource Centers were a key element of relationship building between Doctors of the World and the hospitals, particularly in the case of Gjilan Hospital. The fact that DOW valued the knowledge and professional development of Kosovar health professionals provided an entrée for more difficult policy negotiations. For example, the Gjilan Resource Center was established during discussions between DOW and Gjilan Hospital management regarding their reluctance to host a multi-ethnic clinic. Hospital commitment to the clinic improved following the DOW commitment to establish the Center.

OBSTACLES AND MODIFICATIONS:

The primary modification was the DOW decision to open an additional center in Gjilan, which was not envisaged in the original activity plan.

In addition, the earliest DOW objective presented to USAID indicated that the Center would be open to patients and their families. However, the hospitals would not agree to this, reflecting the hierarchical relationship between doctor and patient in Kosovo. Patients and their families can freely access Health Information Centers (see *Health Information Centers* section), which are better suited to patient needs as they are staffed by two nurse midwives who can answer questions and provide information for the lay person.

SUSTAINABILITY:

DOW signed Memoranda of Understanding regarding sustainability with both Pristina and Gjilan Hospitals. Gjilan Hospital engaged a former DOW translator (who played a key role in side-by-side training as well as in the establishment of the Center) to staff the Gjilan IHERC on a part-time paid basis. Both facilities agreed to assume management

responsibility for the Centers, to maintain the donated equipment, and to continue internet access so long as funds are available.

Primary Achievements

- **Establishment of equipped sustainable International Health Education Resource Centers in Pristina and Gjilan Hospitals.**

III. Equipment

OBJECTIVE:

- *Support 10-12 community health centers to improve reproductive health services with particular attention to:*
  a)Provision of birthing/ reanimation equipment and consumables…

RATIONALE:

Immediately after return in August 1999, DOW undertook a full assessment of the situation of MIH in Kosovo and noted that most of the public health care structures had deteriorated due to lack of maintenance, looting of equipment, and vandalism. The situation was worse in health houses, some of which were almost completely destroyed (Skenderaj and Gllogovc, for example). Maternities were in need of major reconstruction or repair, and women were giving birth in appalling circumstances - without water, electricity or heat, and with a complete lack of equipment and consumables. Most hospitals and health houses (with or without maternities) lacked the most basic sterilization, neonatology, gynecology, and obstetric equipment.

ACTIVITIES:

While simple provision of equipment can only be understood in the context of side-by-side training and other initiatives undertaken by DOW, it is addressed separately here due to the complicated course of the project. Prior to the NATO bombardment, DOW provided a substantial amount of equipment to the then Serbian dominated public system and some equipment to the parallel system. Most of the equipment provided prior to the war was vandalized, stolen, or taken to Serbia with departing Serbian doctors. The bulk of this section therefore refers to equipment donated between August 1999 and March 2002. Improvements in morbidity and mortality related to equipment improvements is almost impossible to discern, particularly because many donations were related to emergency need following the NATO bombardment, and addressed essential gaps rather than improvements on what had existed prior to the conflict. Therefore, impact of these activities will be included in the *Side-by-Side Training* section, as much equipment donation was done in tandem with training.

Following the assessment of specific equipment needs, DOW provided basic equipment and consumables for a total value of approximately US$ 540,000 to Pristina, Prizren,

North Mitrovica, and Gjilan Hospitals, and 12 Health Houses: Suhareka, Dragash, Podujevo, Kamenica, Ferizaj, Vushtrri, Viti, Decan, Skenderaj, Donja Gusterica, Prizren and Rahovec. See Annex 1 for a complete list of equipment donated by site. All equipment has been delivered and hospital staff trained in its use.

In Gjilan and North Mitrovica Hospitals, where DOW developed strong relationships with hospital administration, DOW obtained, delivered, and trained staff in the use of additional equipment paid for by UNFPA or other donors. These donations were based on needs identified by DOW clinicians and hospital staff. DOW played a major role in the renovation of Gjilan maternity, as clinicians negotiated additional furniture and equipment purchases with UNFPA, delivered the materials, and trained hospital staff in utilization.

All equipment purchases for health houses were approved by UNMIK authorities in Pristina and the regions (e.g. Gjilan, Prizren etc.) DOW strictly followed UNMIK recommendations for provision of electronic equipment with regard to selection of equipment, set-up, training of staff in use and maintenance, provision of consumables and spare parts as well as production of manuals in three languages regarding use, maintenance and care of items provided.

Baby warmer being used in Vushtrii Health House

OBSTACLES AND MODIFICATIONS: As obstacles surrounding effective equipment donation and use are pervasive in Kosovo and relate to several project objectives (DOW provided televisions as part of health education activities and several small pieces of equipment specifically for antenatal clinics), problems will be addressed in the section addressing Obstacles and Gaps of the entire project.

SUSTAINABILITY: Unfortunately, the sustainability of the equipment donated varies. In some cases (particularly for the equipment donated in the emergency phase), spare parts are easily obtainable, and hospital staff are literate in equipment use. However, in other cases, spare parts may be beyond the financial means of the facility, rendering the equipment useless until a replacement part is found. In Gjilan, Pristina, and Prizren Hospitals, as well as Prizren Health House, DOW maintained a consistent presence and followed up on any gaps in spare parts. However, DOW was unable to do this in all health houses. While DOW staff worked to ensure that hospital staff were able to procure spare

parts or identify and rectify basic equipment malfunctions prior to their departure, adequate funding (within the Ministry of Health budget) for repairs remains insecure.

PRIMARY ACHIEVEMENTS:

Primary Achievements

- **Substantially upgraded services available in 16 health facilities, addressing emergency post-conflict needs, as well as longer term quality of care needs.**

IV. Health Information Centers

OBJECTIVE:

- ***Community Health Education--***
  …Through this [Health Education] team we will also be able to set up health information centers (with a trained health educator) in all major Health Houses, to further Kosovar access to information about pre and post-natal care and infant and child health. At the end of this project, 10 Kosovo Health Houses will have health information centers.

RATIONALE:

The Information Centers form part of the multi-level DOW approach. Improving women's and their family's knowledge would boost demand for prenatal services and information and foster healthier practices, such as breastfeeding. Indeed, in the summer of 2000, DOW estimated that 10% of all maternal mortality in Kosovo was caused by unsafe home birth (that is to say that the mother would almost surely survive in a hospital setting). The DOW Health Education Team reasoned that establishing Health Information Centers near to gynecological waiting areas would allow Information Center staff to reach any women presenting themselves for gynecological care and to educate them about a variety of reproductive health topics, including the importance of regular check-ups and hospital delivery. Moreover, the Health Information Centers would improve the education currently available by eliminating the hierarchical physician/patient relationship extant in Kosovo and creating a space designed for health education and open discussion.

ACTIVITIES:

Doctors of the World has established fifteen Health Information Centers throughout Kosovo since October 2001. Located within existing health facilities (two in Gjilan Hospital, and one each in Dragash, Ferizaj, Kamenica, Viti, Mitrovica, Malishevo, Rahovec, Vushtrri, Podujevo, Gllogovc, Suhareka, Prizren, and Skenderaj Health Houses, which together, serve a population of approximately 1,200,000, or 62% of the Kosovar population[4]), the Centers offer reproductive health information and education for women

[4] Source: OSCE Municipal Profiles

and their families, referral to suitable health services, and opportunities for women to openly discuss reproductive health issues they may be wary of broaching with their physician. Sites were chosen based on number of OB/GYN clients and DOW ability to monitor progress (i.e. pre-existing relationships, DOW staff already working within the facility etc.). Additional sites have been identified for which DOW is seeking further funds. Three Health Information Centers have been further developed into Antenatal Clinics (Gjilan Hospital, Prizren Health House, and Ferizaj Health House), which will be addressed in a separate section of this report.

Information Centers are staffed by at least 2 midwives, identified from the UNMIK paid staff within each health facility, and selected for their enthusiasm, commitment and interest in health education at the primary health care level. The Doctors of the World Health Education team trained these 38 midwives in health education methodologies, adult learning principles and reproductive health topics. After the initial training, the DOW Health Education Team continued to regularly monitor and support the midwives until the end of the project.

Each health facility was asked to provide a suitable space for a permanent location, preferably close to the gynecology waiting area or the maternity section. The Centers are equipped with a table, chairs, a few children's toys, bookshelves, brochures and brochure holders, a television, VCR, and several videos on prenatal care and childbirth. The midwives also use DOW donated visual aids, such as food pyramids, cloth pelvises and cloth infants, and stages of pregnancy posters.

RTK television, launching media campaign at Kamenice Information Center.

As of January 2002, more than 3500 women access the Centers monthly, receiving information appropriate to their needs (see figure IC-1).

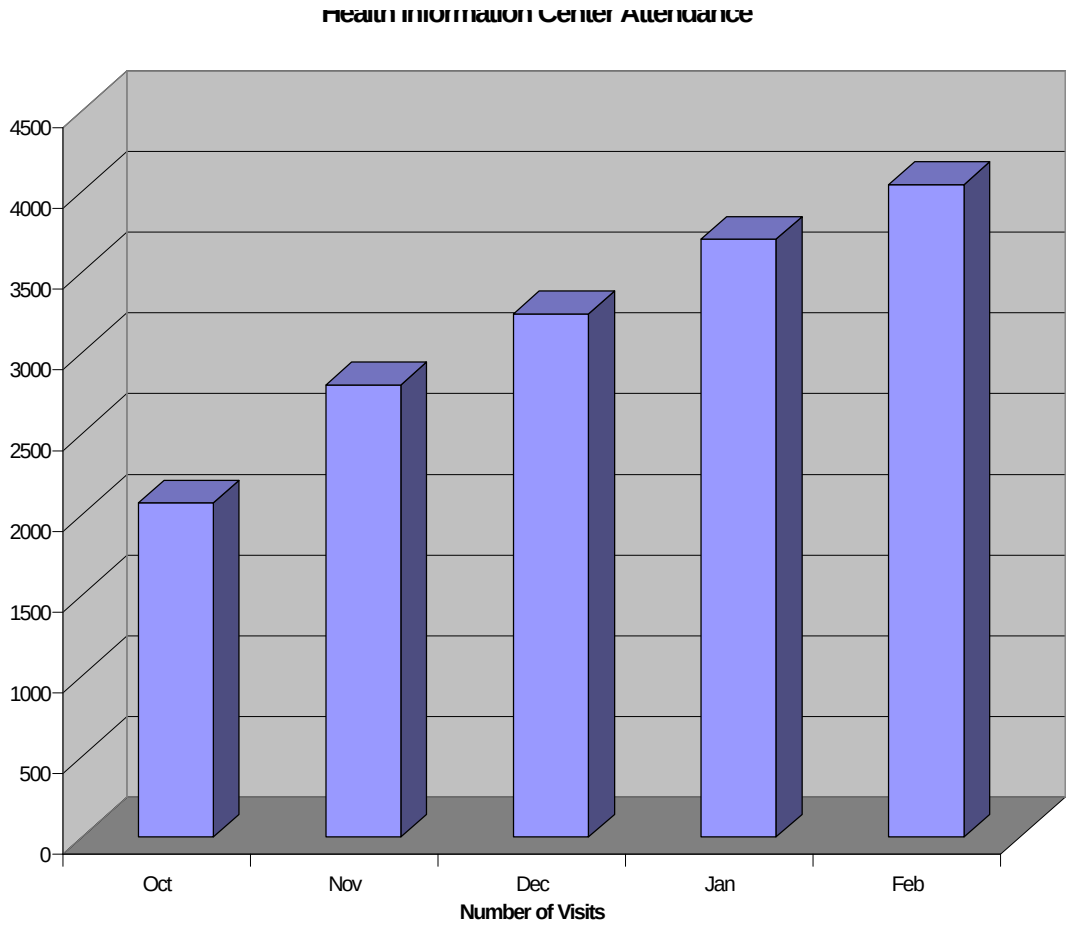


Fig IC-1

According to subject areas identified by DOW as knowledge gaps, topics discussed at sessions include: healthy pregnancy, nutrition in pregnancy, risk signs in pregnancy, contraception, family planning, breastfeeding, menopause and menarche. Consistent with the mission of the centers, antenatal care, family planning, and contraception were the topics of most interest to the clients of the centers (see figure IC-2).

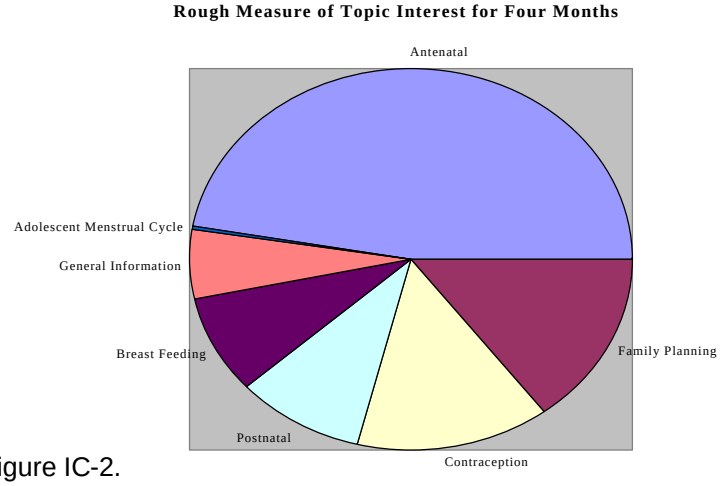


Figure IC-2.

To encourage use of the Centers and thus antenatal care and hospital births, DOW launched an Information Center mass media campaign in January of 2002. The campaign included over 180 radio spots, 14 television advertisements, a spot on the evening news on RTK (one of the most widely watched stations), and 31 days of newspaper advertisements in the most widely read newspaper, *Koha Ditore*. Many of the midwives in the Information Centers also conducted their own 'phone-in for information shows' on local radio stations.

Anecdotal evidence suggests that women are benefiting greatly from the information provided and shared at the Centers. Midwives working in the birthing suites of the health facilities indicate that they note differences in the behavior and knowledge of women who have visited the Information Centers as compared to those women who have not utilized the Centers.

"A woman living in Malishevo, one of the poorest areas of Kosovo had been trying to become pregnant for 6 years. After visiting the midwives in the local Health Information Center and learning about how her body functions, she became pregnant. She attended the Women's Information Center as she had missed two periods, and 'didn't feel quite right'. The midwives talked with her and decided to check if she was pregnant by doing a urine pregnancy test. The test was positive! The woman dissolved into tears; she was so happy to be pregnant. She said that this would never have happened if the midwives hadn't taught her how to use the menstrual calendars and know when it was the right time in her cycle to try for a pregnancy. This woman vowed to attend the Information Center regularly throughout her pregnancy, so she could receive information and support from the midwives and the other women who attended the Center for advice, support and information."

-- Tracey John, RM, BN, IBCLC, Health Education Coordinator

Ferizaj Information Center

Most Health Information Centers have also developed strong relations with hospital staff. Indeed, midwives working in the Centers state that they feel their role has been expanded and that they have more respect from the gynecologists, with some gynecologists regularly referring women to the Centers.

Discussions are presently underway with potential partners to pilot expanded health care services to women at some of these Centers.

I think that we have worked hard, we must try to work more to achieve our goals, We have these successes:
-Women trust to us
-They are more free to express their problems
-During the delivery, they have less frighten.
-They understood the important breast-feeding.
-They have learnt how to help themselves to have healthy pregnancy and healthy family.

--- Teuta Dermaku and Arbenita Aliu, Health Information Center staff, Gjilan Hospital

OBSTACLES AND MODIFICATIONS:

Few obstacles were encountered in implementing this portion of the project. The mass media campaign was effective (as was word of mouth), bolstering attendance dramatically. Hospital and health house staff were cooperative and eager to carry out the activity. The most substantial hurdle was training midwives how to lead open and informative discussions, but regular DOW monitoring as well as DOW meetings involving all Information Center midwives resulted in stronger enthusiasm and understanding of the importance of creating a comfortable environment for visitors.

A slight obstacle which affected three of the Health Information Centers was the concern of hospital gynecologists that the Information Centers were decreasing the number of women they were seeing in their private clinics. DOW staff discussed these issues with health facility directors, and in all but one Center, relations between the gynecologists and the midwives working in the Information Centers have become stronger and more respectful of the role each plays in addressing women's health needs.

The primary modification was the decision to open 15, rather than 10 Information Centers. This decision was based on the relatively low cost of establishing a Center as well as the ability of the DOW Health Education Team to effectively monitor and support more than 10 sites.

SUSTAINABILITY:

Sustainability is partially ensured by the fact that all initial capital costs were covered by DOW, and ongoing maintenance costs are minimal, primarily comprised of midwife salaries already included in the Kosovo Consolidated Budget. In addition, DOW established a firm commitment from each health facility director and Municipal Health Manager to support this project and ensure it is sustained. This commitment was formalized in a Memorandum of Understanding, which committed health facility directors to ensure the Centers are open 5 days a week and staffed by two midwives. Finally, Doctors of the World involved the Ministry of Health in the development process, obtaining their commitment to maintain the Centers as well.

Primary Achievements

- **Established 15 sustainable Health Information Centers, which inform over 3500 visitors per month about pre and post natal topics and foster healthy pregnancy and infant health, ultimately contributing to decreased maternal and infant morbidity and mortality.**

V. Community Based Health Education

OBJECTIVE:

- ***Community Health Education--***
  With the remaining time, our community health education team will be able to complete their Training of Trainers (TOT) (including monitoring of the trainers' work) with local NGOs and to thus cover most of the municipalities in Kosovo, including coverage and support of the minority populations… most municipalities will have trained local NGO volunteers who will carry on health education in their communities.

RATIONALE:

As stated earlier, following the bombardment, DOW identified failure to give birth in a hospital and the associated lack of prenatal care as major causes of both maternal and infant mortality. In general, those who do not access these services are at risk for other unhealthy behaviors, such as poor nutrition, using infant formula rather than breastfeeding, and lack of family planning knowledge. Moreover, in 2000, DOW identified one of the primary causes of the 49/1000 perinatal mortality rate as being premature birth. Increased access to prenatal care contributes to a decrease in premature birth rates.

Similar to the Health Information Centers, through community-based health education, DOW aimed to encourage healthy behavior during pregnancy and boost demand for prenatal and family planning services by training local partners to provide training in the community. However, in contrast to the Health Information Centers, the Community-Based Health Education initiative would reach those living in rural areas for whom access to a health house is difficult, and would reach minority (Gorani) populations in Dragash.

While increasing demand for OB/GYN services does not decrease maternal and infant mortality by itself, it does contribute to a decrease in preventable deaths related to failure to address pregnancy or labor complications that could be addressed in a hospital setting, as well as to a decrease in difficulties that could be prevented through healthier practice, such as proper nutrition and breastfeeding.

ACTIVITIES:

Doctors of the World trained 458 lay male and female health educators, most of whom are nurses, and all of whom are members of local NGOs, including: Flaka and Mother Teresa in Dragash, Shoq e Grave in Suhareka, Era Humanitare and Lexhenda in Viti, Lidhja e Gruas in Kamenica, Femrat ne Veprim in Podujevo, Mother Teresa in Vushtrri, Center for the Protection of Women and Children in Skenderaj, and Hareja and Mother Teresa in Rahovec. Together, these NGOs serve communities with a combined population of approximately 600,000, or 30% of the Kosovo population.

Lay health educators were trained beginning in August 1999 in health education methodologies, general nutrition, and reproductive health topics such as antenatal care, the importance of a hospital delivery, risk signs in pregnancy, family planning, anemia, and breastfeeding. Working independently in over 480 villages, health educators reached over 8,500 people. Materials used in health education sessions address the above mentioned topics in a way that fosters participation, such as a visual aids with simple pictures, felt board food pyramids, birth atlases, pregnancy diaries, videos, and brochures. Many lay health educators were regularly monitored by the DOW health education team (gaps to be addressed in the *Obstacles and Modifications* section.)

To discern community-based health education impact, a cross sectional survey was done in four communities where Community Health Education took place. Cross sectional studies still leave some doubt as to the temporal relationship of the findings, but they are the most efficient means of assessing general educational retention indicators, such as health information learned.

Findings:

1. As reported by a random sample of 147 women, 87% surveyed who had attended a health education session stated that they had made a health change of some kind following attendance at a community based health education session.
2. Attendance also significantly resulted in a change in contraceptive use.[5] (see figure CE-1).

[5] ($p<.001$, 95% CI .26-.52)

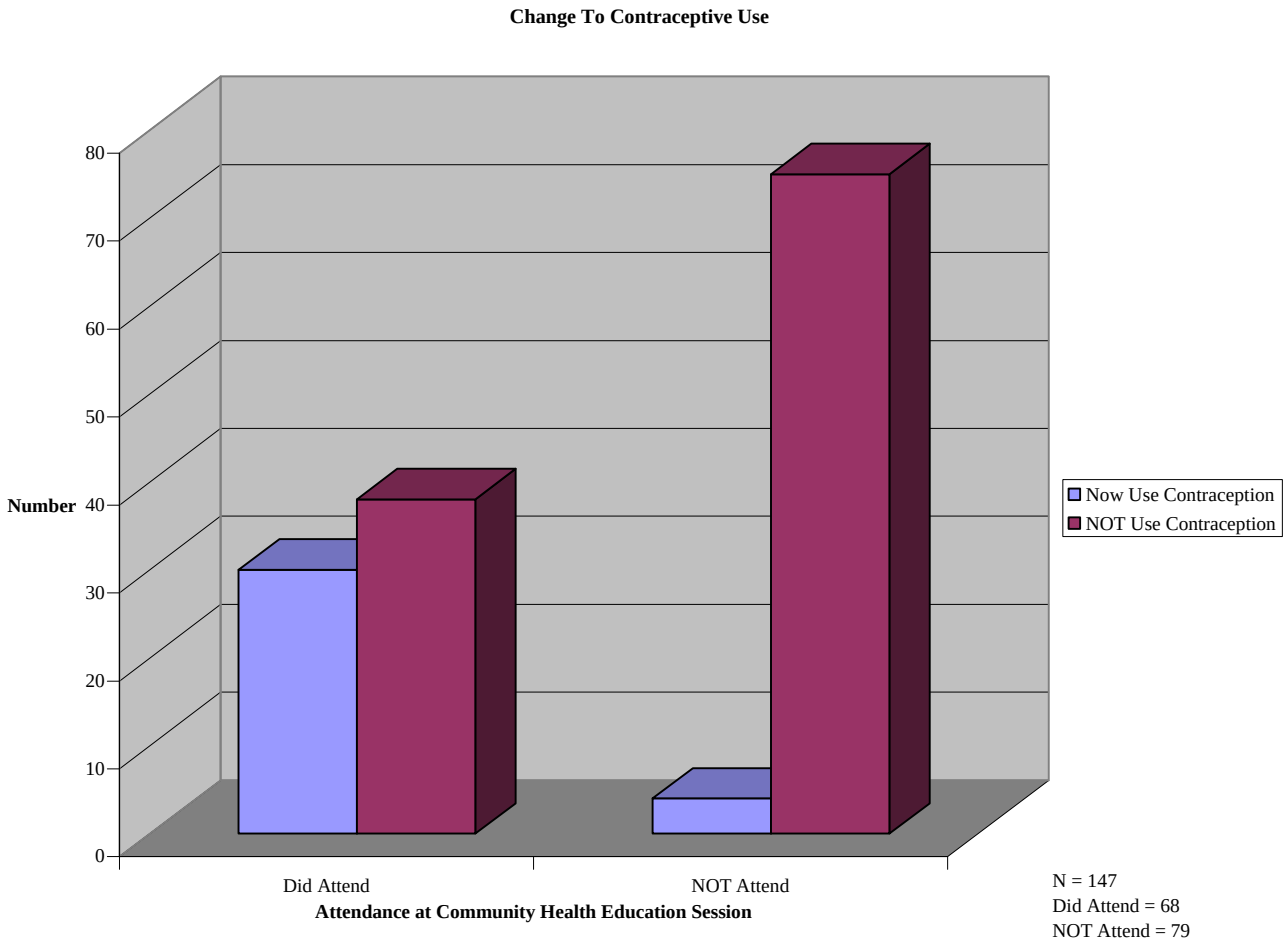


Figure CE-1.

3. Attendance significantly resulted in the knowledge that if pregnant, a woman should visit her physician four or more times during the pregnancy[6] (see figure CE-2).

[6] (p<.001, 95%CI .63-.85)

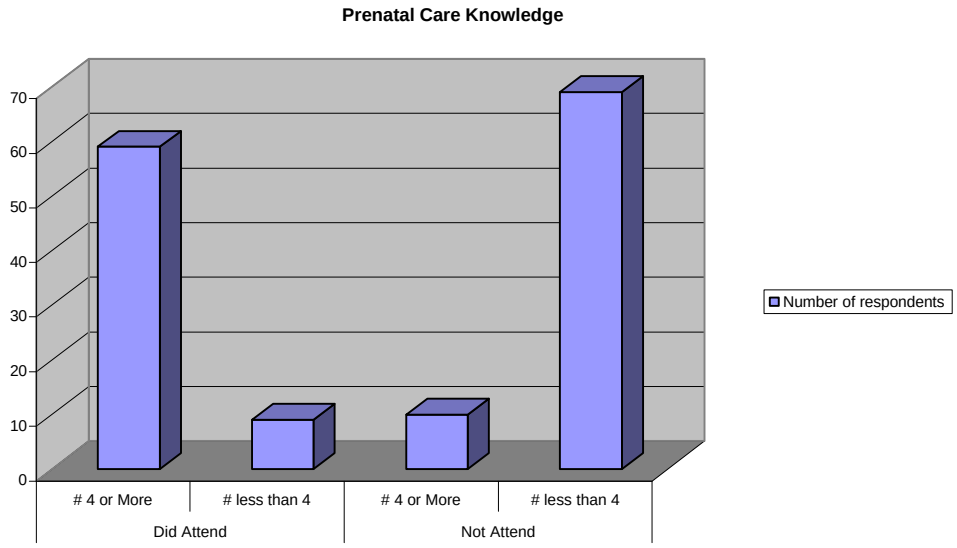


Figure CE-2

87% of those surveyed who had attended a Community-Based Health Education session stated that a pregnant woman should visit a doctor 4 or more times during pregnancy, while only 13% of those surveyed who had not attended a session gave this response.

It is interesting to note that the second and third topics of most interest to clients who visit the DOW Health Information Centers in the same regions (as demonstrated by the number of client sessions on these topics) are family planning and contraceptive use. So, women being served by both Health Information Centers and Community Based Health Education are receiving a consistent health message and appear to be altering behavior accordingly (see figure CE-3 below).

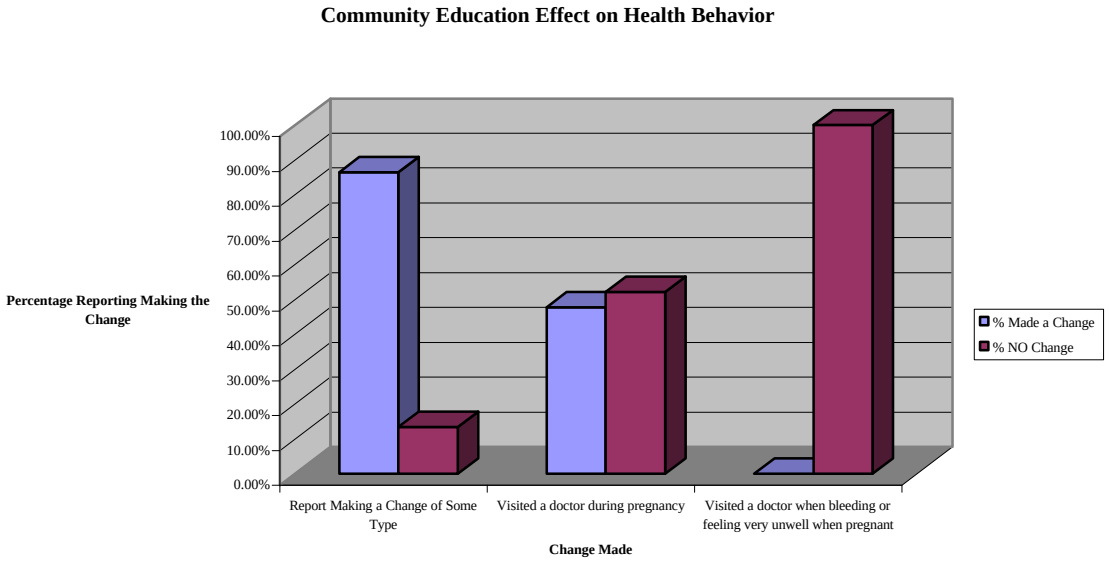


Figure CE-3

Again, as in the case of the Health Information Centers, one cannot say that Community Based Health Education is directly correlated to improvements in mother and infant morbidity and mortality. However, it is clear that attendance at these sessions has positively affected knowledge. Moreover, reported behavior modifications of 87.5% of attendees, indicates that women who attended the sessions not only learned important information, but also *applied* that information to their behavior. Behavior changes indicate success of DOW efforts, and are an intermediate step to improving outcomes.

OBSTACLES AND MODIFICATIONS:

Few obstacles were encountered during the project set-up, but, due to the inaccessibility of implementation sites, monitoring was difficult. As a result of other program requirements and human resources capacity only 140 lay health educators have had their sessions monitored. The DOW Health Education Team is in contact with the other 318 health educators, and, as they were always available for consultation with any health educator and detected few problems with those who were monitored, they assumed activities were running smoothly.

DOW also aimed to establish community-based health education in “most” municipalities, when it was in fact done in 8 out of 30. However, for the reasons outlined above, the human resources input requirements for this would have been onerous.

Finally, DOW also intended to cover minority areas. While the Gorani community of Dragash was targeted by DOW efforts, few other minorities benefited from health

education sessions. This was again due to human resources capacity, but also to the fact that DOW established a complementary project dedicated to addressing health education in Roma and Ashkalia communities, which is discussed in a later section.

SUSTAINABILITY: As the lay health educators have always worked on a volunteer basis and were supplied with reusable materials, their activities are sustainable. While they will not receive further DOW monitoring or support, they are all affiliated with local NGOs and are thus likely to be motivated and supported in continuing their work. Quality assurance is somewhat of a concern, but given the fact that most of the health educators are nurses, DOW assumes that health information conveyed will be correct and relevant.

Primary Achievements

- Approximately 460 sustainable health educators trained in 8 rural municipalities, serving over 480 separate villages;
- Over 8,000 members of the community already reached with reported significant positive changes in health behavior.

VI. Direct Provision of Care in Minority Areas

OBJECTIVE:

- *…Improve access to reproductive health services in Serb areas through provision of consumables and training of 10 midwives and aides in Donja Gusterica and Gracanica.*

RATIONALE:

As opposed to other MIH Project activities, direct provision of care in minority areas focused on addressing immediate need rather than capacity building. Consumables, equipment, and training were indeed provided to minority facilities, but these activities are discussed in other sections (i.e. Equipment, Side-by-Side Training). To address emergency needs regarding OB/GYN access in minority areas, DOW clinicians traveled regularly to isolated minority areas to see women who would otherwise not be able to access OBGYN services without traveling to another enclave. While DOW clinicians provided ambulanta staff with training and health education materials during these visits, the primary focus was to provide care to one of the most vulnerable populations in Kosovo – Serbian and Roma women living in enclaves lacking safe access to a health house.

ACTIVITIES:

From December 2000 to November 2001, approximately 140 women were provided with direct care in Velika Hoca, a Serbian enclave located in Rahovec municipality. Women came with gynecological and pregnancy related complaints as well as for pregnancy testing. DOW clinicians referred the women to secondary or tertiary care when necessary.

Through their presence at the ambulanta, DOW also facilitated the donation of equipment from other sources, and, in some cases, distributed consumables purchased with Kosovo consolidated budget funds.

As part of NetAid matching funds activities, (which are primarily covered in the following section) DOW clinicians provided care to 78 Ashkalia women in Fushe Kosovo, who were afraid to seek services in an Albanian facility. As in the case of Velika Hoca, DOW staff capitalized on their presence in Fushe Kosovo to lobby UNMIK for finding a sustainable solution to poor minority access.[7]

While this direct provision of care did not impact a substantial percentage of the population (apart from training and provision of equipment to minority facilities, which is discussed in the *Equipment* and *Side-by-Side Training* sections of this report) the DOW intervention responded to an urgent need in a cost-effective manner (activities did not require additional human resources and facilitated DOW involvement in Kosovar health care integration). One could also assume that for those approximately 200 women seen, the impact could be substantial, as they may not have otherwise sought care. Indeed, several women suffered from simple gynecological problems that had been untreated since 1997 and that could have lead to sterility or other complications.

OBSTACLES:

Primary obstacles involved poor weather impeding access to Velika Hoca, or the occasional non-presence of the nurse in the Velika Hoca ambulanta, who was the only health professional.

SUSTAINABILITY:

In terms of direct provision of care, DOW activities are not sustainable, nor were they intended to be. DOW clinicians filled an existing gap that is slowly being closed as UNMIK attempts to integrate the health care system.

Primary Achievements

- **Provided needed OBGYN care to approximately 220 minority women who lacked safe access to a secondary or tertiary care facility.**

VII. Side-by-Side Training

OBJECTIVE:

- ***Clinical Support for Secondary and Tertiary Health Care—*** *[The DOW intervention will focus on] implementation of updated guidelines on these problem areas [hypertension, pre-eclampsia management, fetal monitoring, neonatal*

[7] Through another project, DOW is still involved in this issue, and fortunately, Ashkalia access to Albanian facilities in Fushe Kosovo is improving.

resuscitation, and pregnancy and postpartum complications] and for institutionalization of evidence-based clinical practice (such as case reviews) for labor and delivery across the continuum of care. This will be supported by the interventions of expatriate clinicians (midwives, obstetricians, and neonatologists) through staff training, clinical precepting and supervision, protocol implementation and case review processes .

- ***Perinatal Support in Pristina Hospital (as the main reference hospital for complicated births)—***
  DOW will address equipment, equipment training and personnel training gaps in the area of perinatal care in Pristina University Hospital. There are two neonatal intensive care units (NICU) in the Pristina University Medical Center, one in proximity to the Obstetrics/Gynecology department which takes care of infants born in the hospital, and the other in the Pediatric hospital receiving babies born elsewhere. DOW's main goal for this facility is adequate monitoring of cardiorespiratory functions to improve the mortality rate of infants above >1000 g birth weight and of surgical cases.

RATIONALE:

As already noted, following the NATO bombardment, DOW re-evaluated maternal and infant health care gaps in August of 1999. According to this assessment, DOW concluded that Albanian medical professionals at all levels, absent from hospital practice for ten years, were in need of training, and that there were deficiencies in healthcare system organization and management. Facilities were oriented toward meeting emergency needs, resulting in a lack of systemic thinking, strategic planning and the development of concrete action plans for improving reproductive health services in Kosovo. Lack of emphasis on evidence-based medicine fostered a lack of accountability as well as continued poor practice.

Rather than conducting short-term theoretical trainings that would allow little room for practical follow-up, explanation of how changed practices improve outcomes, or facilitation of hospital management re-organization, DOW elected to conduct ongoing side-by-side training. Side-by-side training would entail clinical pre-cepting of Kosovar health professionals, preferably by an expatriate midwife and obstetrician team. As explained in the *Introduction,* midwives do not typically participate in decision-making in Kosovar health facilities. Therefore, the presence of an expatriate physician was essential to impact the practice of Kosovar physicians. Moreover, expatriate doctor and midwife teams modeled effective cooperative relationships for their Kosovar counterparts. The long-term presence of expatriate clinicians in Kosovar health facilities facilitated relationship building, ensuring that improved practices would be understood and maintained. Indeed, as will be outlined in the *Obstacles and Modifications* portion of this section, gaining trust and respect of Kosovar colleagues was often a long process, but one that was key to affecting change in practice. Finally, a long-term presence was important for the efficacy of the training, as expatriate clinicians took time to become familiar with the nature and scope of clinical, administrative, and policy gaps in Kosovo health care facilities.

ACTIVITIES:

Geographic priorities were determined according to number of births and coverage by other international NGOs. Project sites thus changed over the course of the project, as DOW filled the gap left by departing NGOs. However, the initial geographic foci of Prizren, Pristina, and Gjilan remained constant, with minor changes in health house project sites.

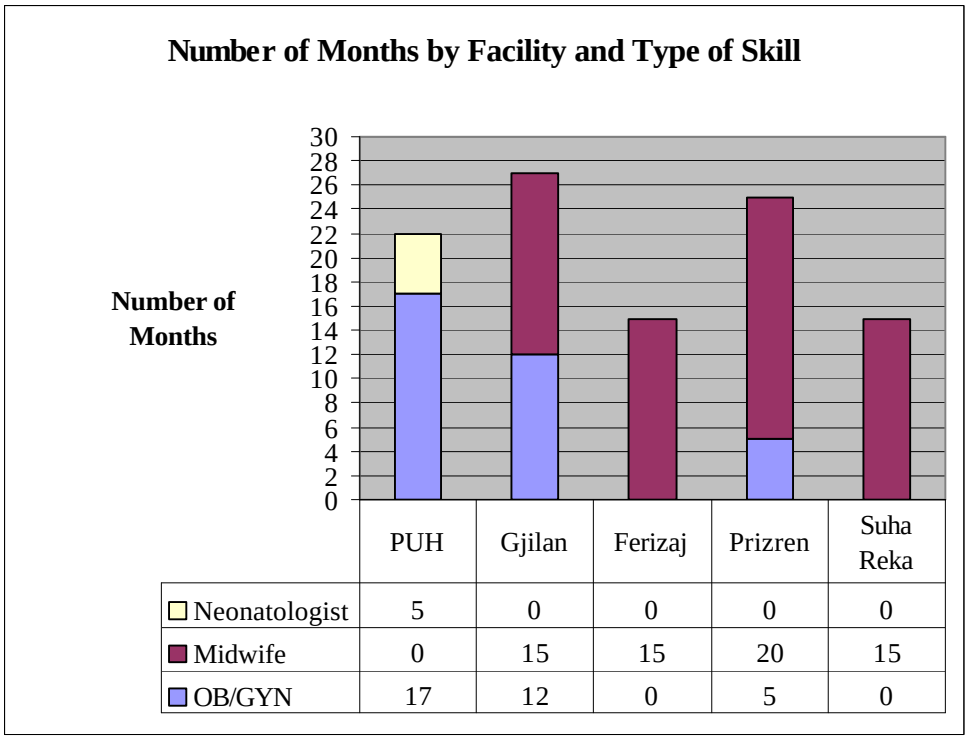
DOW clinicians provided training in the following facilities:

- Gjilan Hospital
- Pristina University Hospital
- Prizren Hospital
- North Mitrovica Hospital
- Prizren Health House
- Ferizaj Health House
- Rahovec Health House
- Suhareka Health House
- Shterpce Health House
- Fushe Kosovo Health House
- Donja Gusterica Health House
- Dragash Health House
- Podujevo Health House
- Kamenica Health House
- Vushtrri Health House
- Viti Health House
- Decan Health House
- Skenderaj Health House

North Mitrovica Hospital, and Dragash, Podujevo, Kamenica, Vushtrri, Viti, Decan, Shterpce, and Skenderaj Health Houses received the least amount of side-by-side training. While activities undertaken at those sites are included in the narrative of this report, those sites were not covered in the evaluation due to time and human resource constraints. Training in these sites usually consisted of provision of regular seminars regarding equipment use or other targeted issues such as neonatal resuscitation. Fushe Kosovo and Donja Gusterica Health Houses are covered in the *Minority Health Care Access – Net Aid Matching Grant* section.

Since the beginning of 2000, DOW contributed 104 person months of side-by-side training to Gjilan Hospital, Prizren Hospital, Pristina University Hospital, Suha Reka Health House, Ferizaj Health House, and Rahovec Health House. Gjilan Hospital and Prizren Hospital received the greatest amount of time (see figure PT-1). (Clinicians working in Pristina University Hospital trained in both the maternity and in neonatal intensive care units 1 and 2.)

Figure PT-1.



Twenty-three people (20 individuals with three repeating), including 13 midwives, 8 OBGYNs and two neonatologists conducted training. Pristina University Hospital was the beneficiary of the greatest number of side-by-side trainers at 9, and Gjilan and Prizren Hospital received the same number of trainers at 5 people (see figure PT-2). Gjilan, Pristina and Prizren hospitals were the only sites that had expatriate clinicians in place full time. The other sites were staffed approximately one day per week.

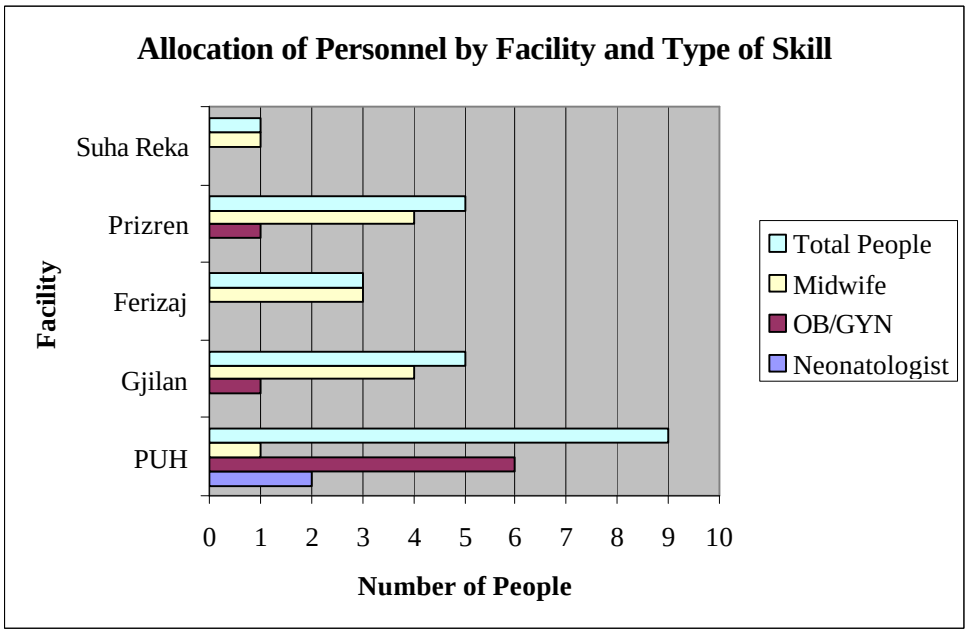


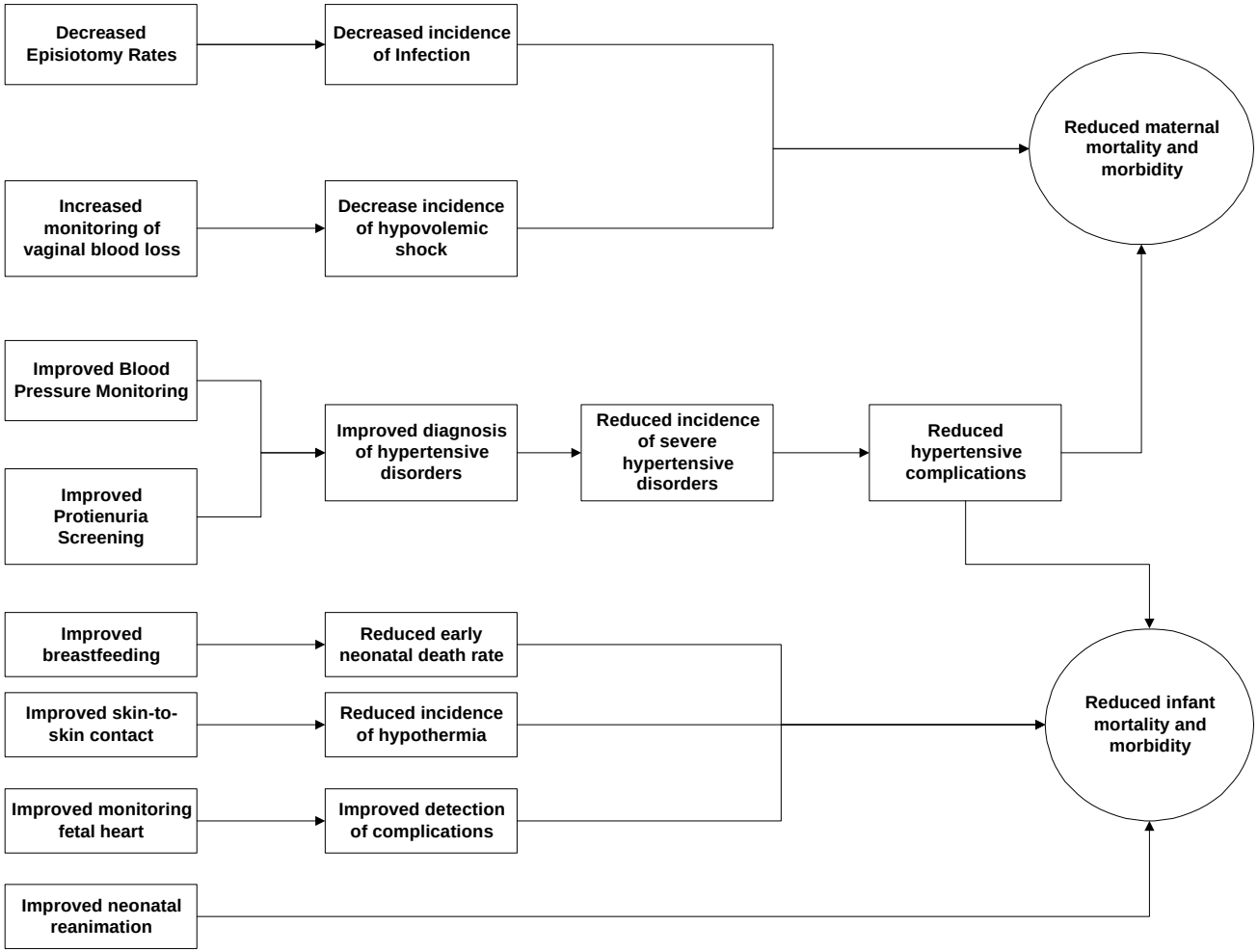
Figure PT-2.

Based on the 1999 assessment as well as regular observation and data collection from hospitals and health houses, participation in WHO and UNFPA initiated working groups, and small surveys conducted in the field, DOW designated the following areas as priorities:

A. *Monitoring of mother's status during labor and postpartum for purposes of reduction and detection of bleeding and infections;*
B. *Hypertension management;*
C. *Newborn care and increased coverage of vaccine preventable diseases (BCG);*
D. *Neonatal reanimation;*
E. *Fetal monitoring to reduce fetal suffering.*

The relation of each to maternal and infant morbidity and mortality is outlined in the causal pathway on the following page.[8]

[8] Note: In developing the causal pathways, it was assumed that changes in knowledge resulting from DOW trainings would lead to changes in practice.


Decreased Episiotomy Rates
Decreased incidence of Infection
Increased monitoring of vaginal blood loss
Decrease incidence of hypovolemic shock
Reduced maternal mortality and morbidity
Improved Blood Pressure Monitoring
Improved Protienuria Screening
Improved diagnosis of hypertensive disorders
Reduced incidence of severe hypertensive disorders
Reduced hypertensive complications
Improved breastfeeding
Improved skin-to-skin contact
Improved monitoring fetal heart
Improved neonatal reanimation
Reduced early neonatal death rate
Reduced incidence of hypothermia
Improved detection of complications
Reduced infant mortality and morbidity

Doctors of the World (DOW) was the only international NGO working in the maternal infant health sector to provide side-by-side training on such a large scale in Kosovo. The most successful site was Gjilan hospital, due to the long-term presence and commitment of a DOW OBGYN/midwife team and the willingness of Gjilan Hospital staff to undertake changes to positively affect maternal and infant outcomes.

Structured Learning

Formal teaching sessions are considered 'Structured Learning' activities for the purposes of this report. Structured Learning was an integral part of side-by-side training, but was distinct in that trainings comprised formally scheduled sessions addressing specific topics and included the development of lesson plans and the dissemination of hand-outs. Other aspects of side-by-side training were more protracted and less didactic in nature.

Extensive structured learning was conducted throughout the project by international OB/GYNs, nurse midwives, and neonatologists. These sessions took the format of one-day workshops on particular topics, such as neonatal resuscitation, use of magnesium sulfate and management of post-partum hemorrhage. Other learning sessions were more opportunistic in approach. For example, if a DOW clinician witnessed an unsafe practice or a critical incident such as a woman hemorrhaging following delivery, then this would be followed up the next day by an educational session examining the case in question. This additional benefit of side-by-side training allowed for identification of learning opportunities, theoretical training, and then follow-up monitoring and support by the DOW clinician.

Structured learning activities in 2001 occurred in Gjilan Hospital, Prizren Hospital, Pristina University Hospital, and Rahovec Health House. Gjilan and Prizren Hospital staff participated in the greatest number of trainings, due to the higher number of clinical hours staffed by DOW clinicians (see figure SL-1). Midwives received the most training, followed by other health care providers (see figure SL-2). Note should be taken that "General Health Care Provider" includes midwives and nurses.

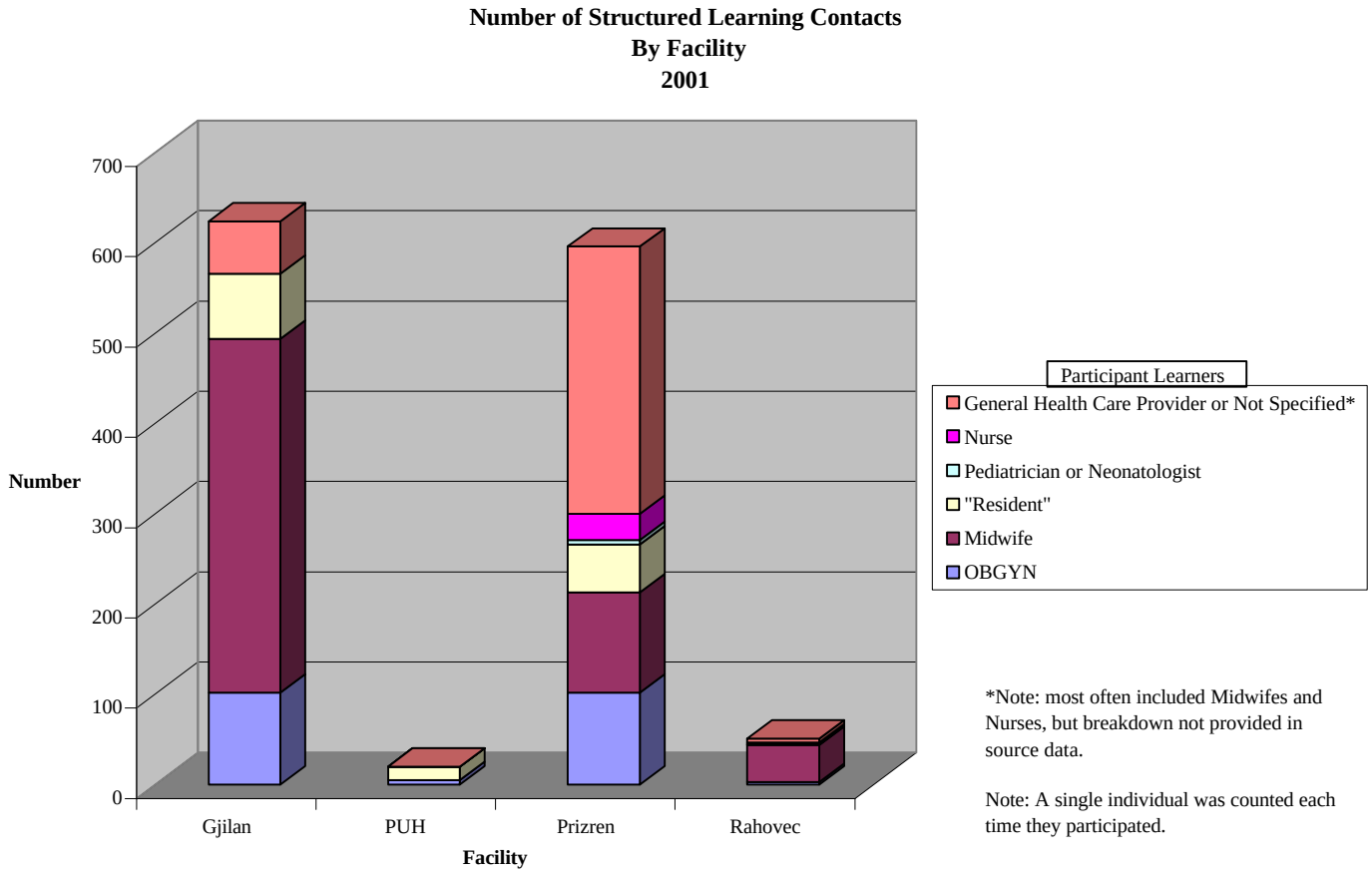
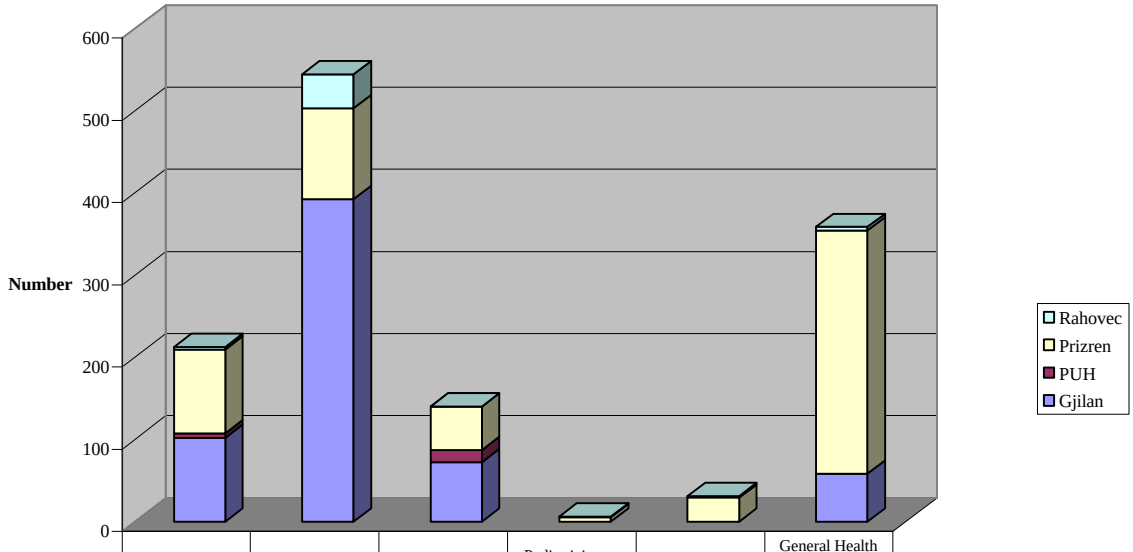

Number of Structured Learning Contacts
By Facility
2001
Number
700
600
500
400
300
200
100
0
Gjilan
PUH
Prizren
Rahovec
Facility
Participant Learners
General Health Care Provider or Not Specified*
Nurse
Pediatrician or Neonatologist
"Resident"
Midwife
OBGYN
*Note: most often included Midwifes and Nurses, but breakdown not provided in source data.
Note: A single individual was counted each time they participated.

Figure SL-1.

Structured Learning Contacts by Skill Type of Learner
2001



	OBGYN	Midwife	"Resident"	Pediatrician or Neonatologist	Nurse	General Health Care Provider or Not Specified*
Rahovec	3	41	0	1	2	4
Prizren	102	111	53	5	29	296
PUH	5	0	15	0	0	0
Gjilan	102	392	72	0	0	58

Note: A single individual was counted each time they participated.

*Note: most often included Midwifes and Nurses, but breakdown not provided in source data.

Figure SL-2.

Topics that were covered in 2001 all related to DOW training priorities and are as follows:

Pristina University Hospital:

- Sepsis and the appropriate use of antibiotics in the neonate
- Review of current labor and delivery protocols
- Gavage feeding, tube feeding by gravity for neonates
- Management of various neonatal medical problems

Prizren Hospital:

- Oxytocin induction and monitoring
- Augmentation of labor
- Pre-eclampsia/ eclampsia
- Use of anti-hypertensive drugs in pre-eclampsia
- Monitoring of mother and baby general approach
- Monitoring- reading CTG tracings
- Monitoring practice evaluating CTG tracings
- Management of pre-eclampsia

- Use of mannitol and diuretics in the treatment of pregnancy induced hypertension (to encourage reduction in use)
- Management of postdates pregnancy (overdue pregnancy)
- Meconium stained amniotic fluid
- Use of episiotomy and repair
- Apgar scoring of the neonate at birth
- Second stage management
- Neonatal resuscitation
- Postpartum hemorrhage
- Slowing second stage as part of PP hemorrhage prevention
- Management of shoulder dystocia
- Prevention of perineal laceration
- Comfort measures for the laboring woman

Gjilan Hospital:

- Pregnancy Induced Hypertension (PIH) - diagnostic and treatment protocols, chart for appropriate patient management
- Training and implementation of the WHO Partogram as a method of documenting progress of labor and fetal and maternal well-being and encouragement of fetal heart monitoring, when appropriate
- Appropriate monitoring for fetal and maternal well being, differentiating between the needs in high-risk groups and normal cases of pregnancy and labor (implementation of fetal movement charts in antepartum department and appropriate use of dopplers and fetal heart monitors in antepartum and labor and delivery area)
- Encouragement of “Baby Friendly Hospitals Initiative” which encourages early “skin to skin” contact of mother and infant to enhance bonding and early breastfeeding and prevent hypothermia, non-routine use of episiotomies, different positions for labor and delivery, encouraging “watchful waiting” and trust of normal labor rather than routine active intervention and management, etc.
- Risk assessment and appropriate triaging of patients in antepartum ward and labor and delivery area
- Preterm labor - methods of prevention, diagnosis and treatment of preterm labor (evidence based protocols)
- Use of corticosteroids during pregnancy
- Neonatal resuscitation skills in the delivery room
- Universal precautions/infection control and nosocomial infections and aseptic techniques
- Anemia in pregnancy
- Professional role of the midwife
- Workshop presented on statistical analysis and internal clinical audit on perinatal outcomes at Gjilan Hospital in comparison to other hospitals in Kosovo and in Europe and the USA
- Initiated case review methodology based on “A Protocol for the Investigation and Analysis of Clinical Incidents” (Royal Society of Medicine, London)
- Cesarean Section technique and anti-microbial prophylaxis

- Components of antenatal care
- Thromboembolism during pregnancy
- Principles of appropriate documentation and various examples of charting forms
- Workshop on pre and postoperative management and prevention of infection after surgery
- Methods of safe transport of premature newborns to Pristina
- Patient assignments in L&D area (designating which nurse or midwife has primary responsibility for each patient for continuity)
- Anesthesia in Obstetrics, maternal-fetal physiology
- Management of gynecological and obstetrical patients in the Intensive Care Unit
- Induction of labor – various methods of induction
- Rh immunization during pregnancy
- Diabetes and pregnancy
- Normal Postpartum and breastfeeding, postpartum contraception
- Postpartum complications (bleeding, infection)
- Urinary tract infections during pregnancy
- Blood transfusion
- Antimicrobial treatment in obstetrics
- Female and male infertility
- Endocrine syndromes

Rahovec Health House:

- Pre-elampsia
- Induction of labor with cytotec (monitoring stressed)
- Postpartum hemorrhage
- Delivery emergencies
- Universal precautions
- Neonatal resuscitation

As can be seen by the many educational topics addressed, DOW clinicians provided hundreds of hours of theoretical trainings across the various sites. All trainings conducted throughout the program were given with appropriate translation, both verbal and written, were supported by scientific evidence, and were in keeping with WHO recommendations. All educational documents provided to health professionals were translated into Albanian, and when appropriate, Serbian. A sample curriculum developed by the DOW OBGYN in Gjilan Hospital is attached as Annex 2.

As the results of structured learning versus other components of side-by-side training are impossible to discern, changes in knowledge, practice, and outcomes in sites with exposure to side-by-side training as a whole are addressed here and are related to DOW training objectives rather than to specific training sessions. The measurable and attributable outcomes of side-by-side training are changes in knowledge and understanding. Concurrent changes in practice and outcome where available, are outlined in this report,

but it is important to note that no causal relationship can be established between the provision of side-by-side training and improved mortality indicators. Regardless, improvements in knowledge, practice, and outcome were measured by comparison of data recorded in the DOW database, a retrospective cohort study, questionnaires regarding knowledge about specific practices, and an observational study.

The changes in clinician knowledge and practice measured during the evaluation and presented in this section as related to training priorities are:

A. Monitoring of Mother's Status

1. **Episiotomy rates in primiparous women**

B. Hypertension Management

2. **Blood pressure recorded before, during and after labor**
3. **Urine screening of proteinuria**

C. Newborn Care and Increased Coverage of Vaccine Preventable Diseases

4. **Specific clinician knowledge and practice about BCG vaccination**

D. Neonatal Reanimation

5. **Specific clinician knowledge about neonatal reanimation**

A. Monitoring of Mother's Status; E. Fetal Monitoring to Reduce Fetal Suffering

6. **Specific practices in the care of the neonate and the laboring mother**

In addition, as it relates to all of the above mentioned training objectives, this section will describe changes in:

7. **Hospital Administration**
8. **Analysis of Mortality Rates**

All of these were also presented to USAID as intermediate indicators of the DOW MIH Project. They were chosen to be included in the evaluation because they are among the most important practices relating to maternal and infant mortality, and they were all measurable within the timeframe of the evaluation and reliable data exists regarding these indicators. The relation of each intermediate indicator to the side-by-side training learning objectives will be explained in each sub-section, and the potential relation of each to changed mortality rates (i.e. impact) will be discussed at the end of this section. As the creation of antenatal clinics were an important piece of side-by-side training, a description of this process will also appear at the end of the section.

1. Episiotomy Rates In Primiparous Women

Episiotomies, which are performed to prevent perineal rupture (which require surgical repair and may be deep enough to lacerate the vagina and the rectal sphincter) are often inappropriately performed in Kosovo, unnecessarily damaging the birth canal, potentially causing hemorrhage or infection. Performance of episiotomies is most often based on

historical practice rather than evidence. The episiotomy rate amongst primiparous women is thus an intermediate indicator of adequate *monitoring of mother's status during labor and postpartum for purposes of detection and reduction of bleeding and infections.* Data collected by DOW from health houses and hospitals from January to September 2000 indicated that "obstetrical causes," that is to say, post partum hemorrhage or infection, were responsible for 20% of maternal mortality in Kosovo. Reduction of bleeding and infection would contribute to a decrease in preventable maternal mortality.

Utilizing the Labor and Delivery Database established by DOW in September 2001 and data presented to UNFPA by both hospitals with the support of DOW, episiotomy rates in primiparous women were compared for September through December of 2000 to September through December 2001. **Rates were reduced by 24% at Gjilan Hospital and 14% at Prizren Hospital (see figures Ep-1 and Ep-2).** The percent reduction at Gjilan Hospital is statistically significant[9], while the change reported at Prizren Hospital is not statistically significant[10]. However, based on the number of deliveries at Prizren hospital for the year 2001, the decrease in the number of episiotomies performed means that 313 women did not endure the discomfort and associated morbidity of an episiotomy. Moreover, it is interesting to note that the reduction is greater at the site with the greater amount of exposure to side-by-side training.

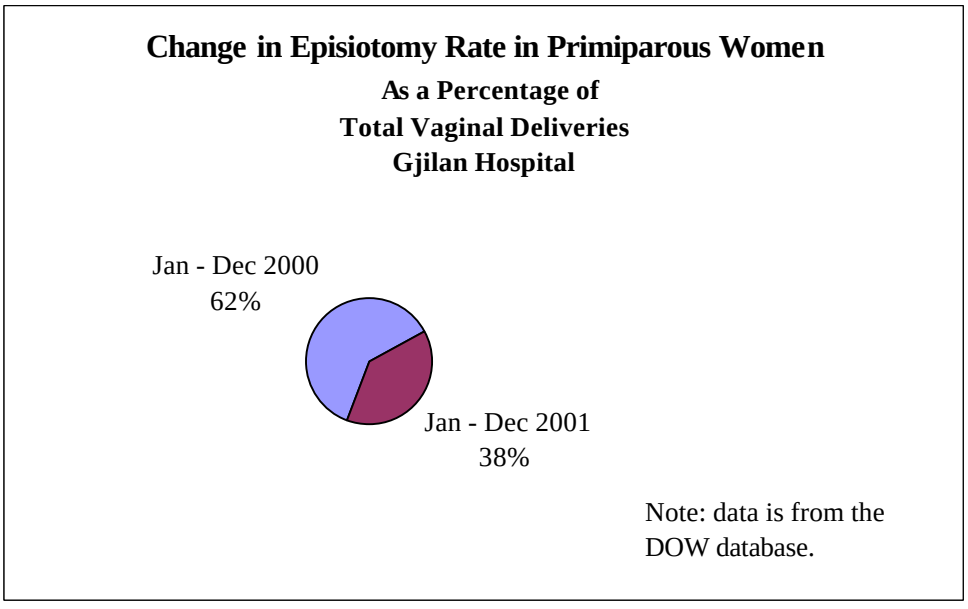


Figure Ep-1

[9] 95%CI for 2000 [.517 to .715], 95%CI for 2001 [.285 to .483]
[10] 95%CI for 2000 [.467 to .668], 95%CI for 2001 [.331 to .533]

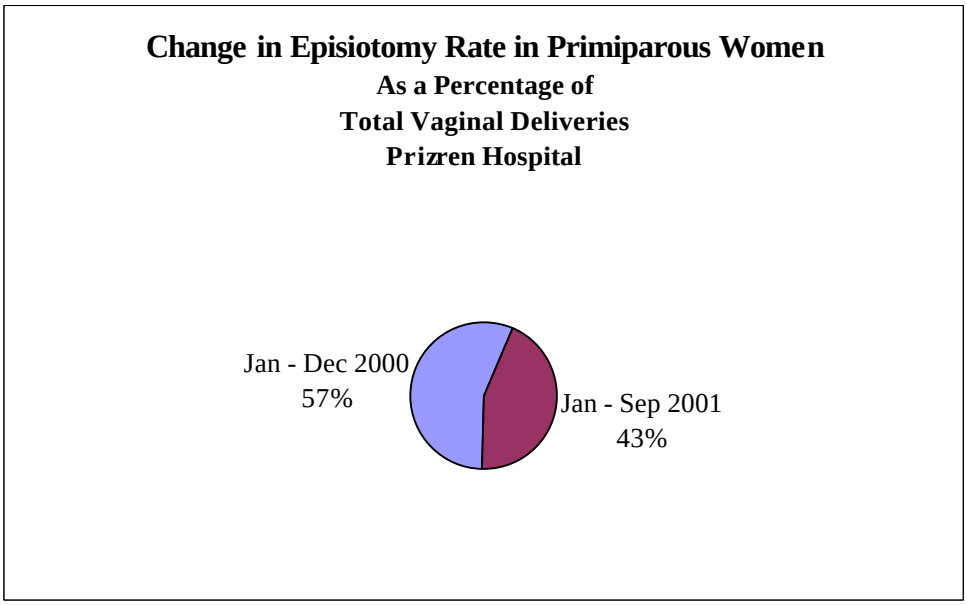


Figure Ep-2

Through side-by-side training, DOW clinicians demonstrated that maternity staff could perform fewer episiotomies without significantly raising the perineal rupture rate, showing that the belief of Kosovar clinicians that episiotomies are frequently necessary is not based on any objective evidence. Obstetricians and midwives in Gjilan are now performing fewer episiotomies, saving delivering mothers from unnecessary pain, blood loss, and possible complications such as infection. This change in practice also points to greater consideration of women's comfort during delivery, a less measurable health service quality objective of the DOW intervention.

2. Blood Pressure Monitoring:

Blood pressure is an important indicator of the existence of hypertensive disorders, including pre-eclampsia, so measuring it and acting on those observations are important intermediate steps toward improved *hypertension management*. Hypertension, (in its acute form, pre-eclampsia) can contribute to maternal mortality through related complications such as cerebral hemorrhage and circulatory collapse. Pre-eclampsia contributes to infant mortality through related complications such as fetal malnutrition and increased risk for low birthweight or premature delivery. Eclampsia, the advanced stage of pre-eclampsia characterized by seizures, is the leading cause of maternal mortality in the United States. It is also a major contributor to infant mortality worldwide. According to the UNFPA, each year, close to 600,000 women die from complications related to pregnancy and childbirth. Hypertensive disorders are among the primary causes of these complications. In addition, these complications contribute to more than three million infant deaths within their first week of life and another three million stillbirths.

DOW clinicians repeatedly stressed the clinical standard of regular blood pressure monitoring during delivery, as well as the positive effect this is known to have on hypertension management.

A retrospective cohort study was done with a statistically significant sample size of medical charts of women who delivered live children in the maternity wards of Gjilan Hospital, Peja Hospital, Prizren Hospital, Ferizaj Health House, Rahovec Health House, and Suha Reka Health House. As records from 1999 are not reliable, 2000 was considered to be the year without exposure to DOW training and 2001 was considered to be the exposure year. Records from each year were then compared. As Peja Hospital has not had exposure to the DOW MIH Project, it was included as the control site. Records were reviewed for the recording of blood pressure before, during, and after labor. A proportional change of 10% or more is statistically significant for this study.

In all sites that had exposure to DOW training, except for Ferizaj, there was a statistically significant increase in the recording of blood pressure before, during, and after labor. While there was not a statistically significant change in Ferizaj, there was an increase of 7.94%. In addition, this increase was significant when compared to the control (See Figure BP-1).

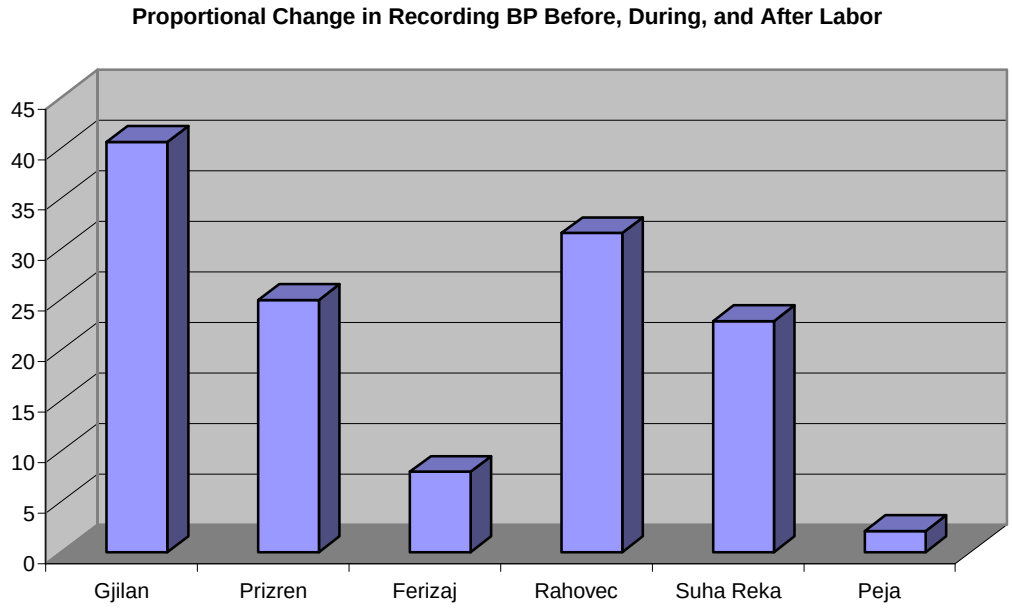


Figure BP-1

Therefore, likely as a result of the DOW intervention, comprehensive blood pressure monitoring increased by 40.6% in Gjilan, by 24.94% in Prizren, by 7.94% in Ferizaj, by 31.58% in Rahovec, and by 22.88% in Suha Reka. The link of these improvements in hypertension management to side-by-side training are strengthened by the fact that blood pressure recording improved by only 2.04% in Peja Hospital over the same time period.

These results are significant, as, for example, if rates of blood pressure monitoring were to stay the same in Gjilan Hospital from 2000 to 2001, then, **1,657 laboring mothers would not have had their blood pressure monitored.**

3. Urine Screening for Proteinuria:

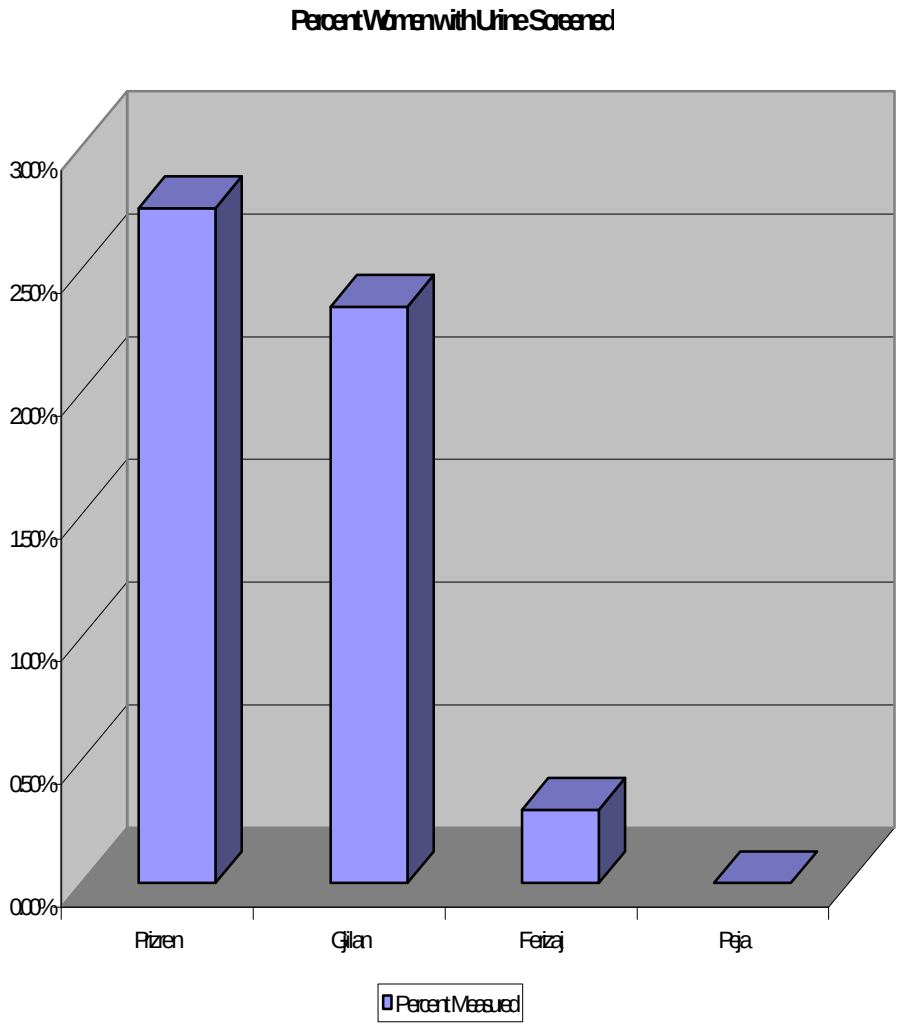


Figure UP-1

Screening urine for protein is another important method for diagnosing pre-eclampsia and other hypertensive conditions, as abnormal secretion of protein in urine is a renal complication of hypertensive conditions. As hospitals did not record whether or not urine of delivering women was screened until the installation of the DOW database, there is no data available prior to September 2001. Therefore, it is only possible to examine the degree

of screening since the inception of the database, and in sites exposed to DOW training that also have the database (which excludes Suhareka and Rahovec Health Houses).

Globally, pre-elcampsia occurs in 4-6% of all pregnancies.[11] Figure UP-1 illustrates the number of pregnant women who have had their urine screened. While the screening rate for this period is less than 3%, it is higher than that reported by the control site of Peja Hospital (0%) for the same time period. Moreover, DOW clinicians trained providers in recognizing symptoms of pre-eclampsia, and as explained earlier, high blood pressure is the first recognizable symptom. Therefore, only suspected cases of pre-eclampsia require urine screening. If one assumes that **4-6% percent of delivering mothers suffer from pre-eclampsia, 3% is a substantial improvement over 0%.**

Improved rates of proteinuria screening and blood pressure monitoring do not necessarily mean that this knowledge manifested in improved diagnoses. However, one can assume that the application of blood pressure monitoring and proteinuria screening to diagnostic practice is borne out in rates of pre-eclampsia diagnosis. Figure UP-2 summarizes pre-eclampsia diagnosis rates for the same period for the screening rates summarized above.

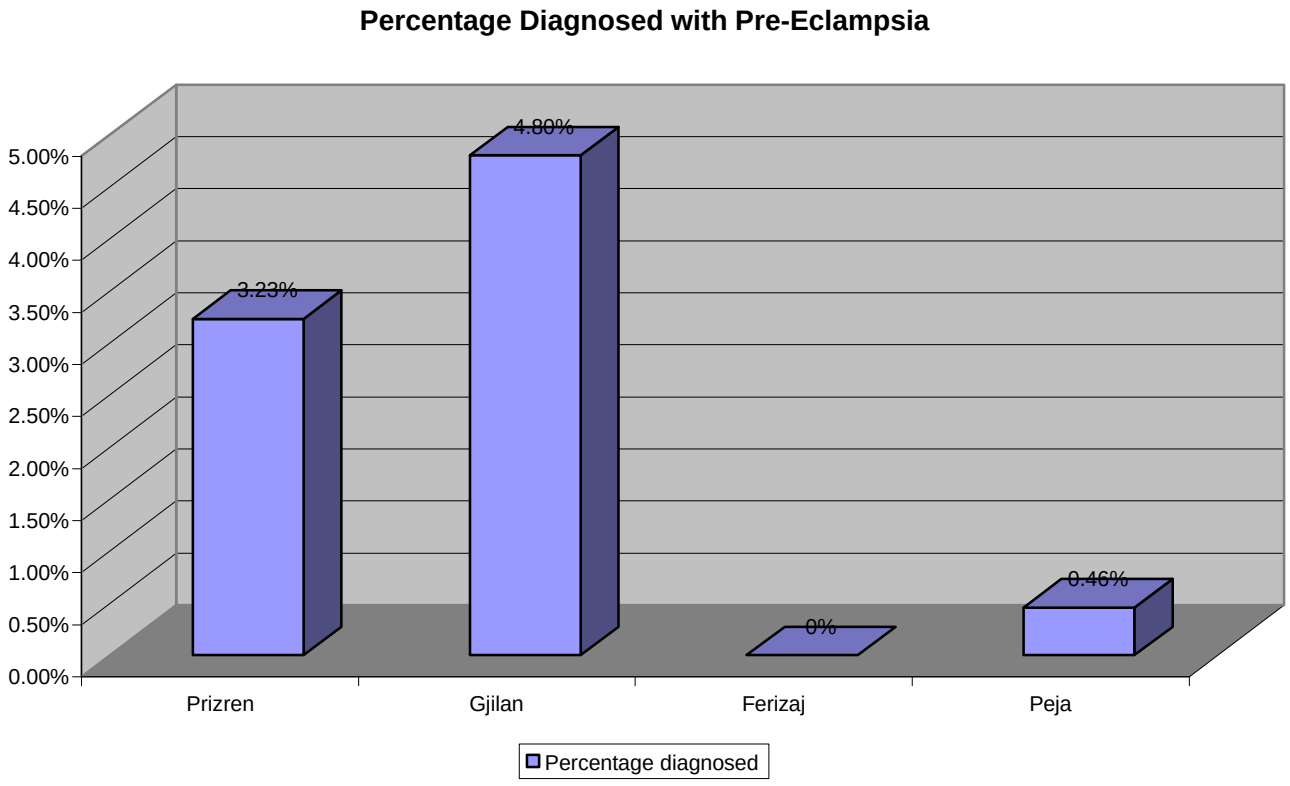


Figure UP-2

[11] This estimate is taken from: "Family Practice Notebook.com," as Kosovo specific data is unreliable. However, as explained by the Family Practice Notebook, rates of pre-eclampsia are not always consistent, and often vary within the same country.

Although not proportionately and not in every site, pre-eclampsia was diagnosed more frequently in those sites which more frequently screened for proteinuria and which regularly monitored blood pressure (see figure UP-2). While there is no way of knowing whether or not these diagnoses were accurate, or whether or not diagnosis was succeeded by treatment in every case, the coincidence of the data suggests that improved monitoring has led to improved diagnosis. As DOW training regarding hypertensive disorders focused on risk signs, symptoms, diagnosis, and treatment, it is likely that the improvements noted above led to improved outcomes.

Ferizaj did not diagnose pre-eclampsia at all, which could be related to any one of several factors, including the likelihood of referring women who may be pre-eclamptic to tertiary care facilities (Ferizaj reportedly referred 25% of all laboring women who presented, while Prizren and Gjilan referred 1% and 0.3% respectively)[12], and the chance that no women were pre-eclamptic during that time period.

One could conclude that while there may not be a causal relationship between screening for protenuria and diagnosis of pre-eclampsia, there is likely a correlation amongst increased recording of blood pressure before, during, and after labor; increased screening of protenuria; and increased diagnosis of pre-eclampsia. Together, **the changes suggest improved attention to hypertensive disorders, and integration of the DOW focus on evidence-based practice.**

Given the fact that DOW approximated in 2000 that hypertension was responsible for 20% of maternal deaths in Kosovo, (approximately 30/100,000 in 1999)[13] change in behavior regarding blood pressure monitoring would contribute to a decrease in maternal deaths related to hypertension. Data regarding infant mortality and its concurrence with hypertensive disorders is not reliably kept in Kosovo, but it is known that accurate diagnosis and treatment of these disorders reduces infant mortality related to complications.

4. Specific Clinician Knowledge and Practice About BCG Vaccination

As one of the DOW training objectives was increased coverage of vaccine preventable diseases, particularly through the use of BCG, which immunizes against tuberculosis, assessing health professional knowledge regarding BCG technique is an intermediate indicator.

Health professionals in five sites exposed to DOW and in Peja Hospital (as a control) were given a questionnaire regarding three important aspects of BCG vaccination methodology. Nearly all respondents understood the need to avoid using room temperature vaccine, while only some knew to avoid using a vial that contained less than a single dose. The most striking contrast came in the understanding of proper BCG administration technique (see figure BV-2). Sites that had side by side training performed considerably better than the control site of Peja Hospital.

[12] Kosovo Perinatal data, 2001: UNICEF and WHO.
[13] UNFPA population survey

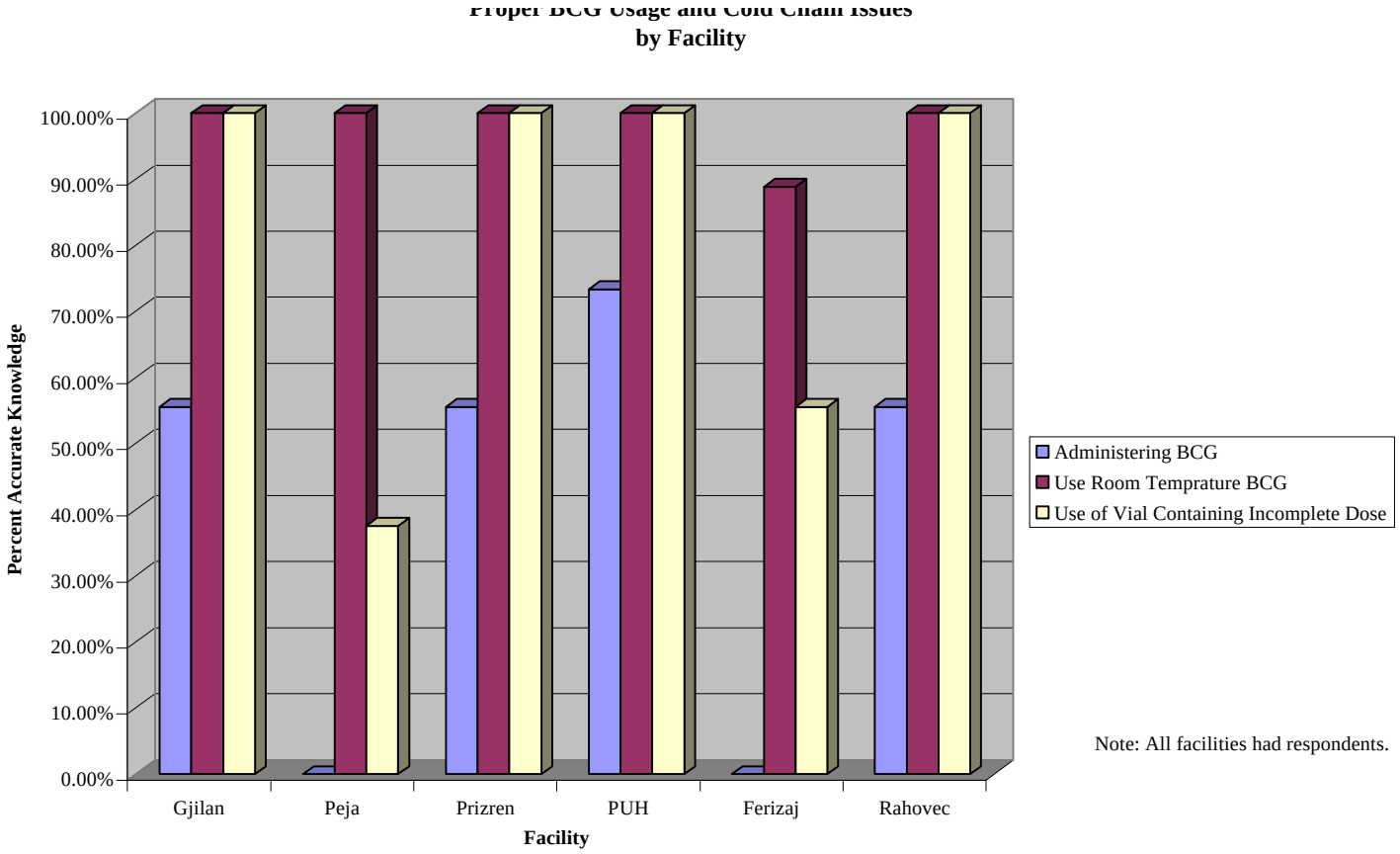


Figure BV-2.

Regarding BCG vaccination technique, 51% of those asked in the sites trained by DOW were correct, while 0% of those asked in Peja Hospital were correct. Knowledge about the importance of using refrigerated vaccine was consistent; there was not significant difference between the control and the sites that were part of the DOW intervention. However, in regard to the necessity of using a vial with a complete dose, results again differed, depending on exposure to DOW training. 90% of those surveyed in the side-by-side training sites stated that a vial should not be used if the dose were to be incomplete, while only 50% of those interviewed in Peja stated this.

Therefore, one could conclude that DOW training played a key role in knowledge upgrades in understanding of BCG vaccination technique and in knowing to use a complete dose.

The application of this knowledge to practice is difficult to measure, as unfortunately, record keeping regarding BCG vaccination technique, the temperature of the vaccine, and the amount of vaccination administered is poor. However, as part of the USAID funded Tuberculosis Control Project, DOW assessed BCG coverage on a province-wide basis. Assessment results revealed that BCG was administered to 92% of all neonates in 2001, whereas it was administered to 88% in 2000. While this improvement is not large, it does account for 1581 neonates[14]. Moreover, this rate includes all recorded births in Kosovo, and does not distinguish between sites included and not included in the DOW intervention.

[14] Kosovo Perinatal Data, 2001: UNICEF and WHO.

One could assume that areas of increased coverage may be concentrated in DOW project sites.

DOW training focused on BCG vaccination administration, rate of coverage does not necessarily indicate improvements in technique. The impact of improved technique would be almost impossible to measure. However, **the comparison of 51% proficiency regarding BCG vaccination technique to 0% at the control site and 90% proficiency regarding the importance of a complete dose to 50% at the control site is significant and indicates good retention of information provided at DOW trainings.**

5. Specific Clinician Knowledge About Neonatal Reanimation[15]

Training in neonatal reanimation was conducted by DOW in all the facilities where side by side training took place (Gjilan Hospital, Prizren Hospital, Pristina University Hospital, Suha Reka Health House, Ferizaj Health House, and Rahovec Health House). Assessing knowledge about neonatal reanimation is the best way of measuring the efficacy of DOW training in the same. Data regarding early neonatal death rates (which would be decreased by improved practice in neonatal reanimation as well as by other practices covered by side-by-side training), will be discussed at the end of this section.

DOW Clinicians and Kosovar clinicians during a neonatal reanimation discussion.

As in the cohort study explained above, Peja Hospital was included in this survey as a control. The skills and knowledge necessary for safe practice during resuscitation techniques should be understood by all medical staff present in a labor and delivery room. Therefore, knowledge amongst physicians, midwives, and nurses of how to resuscitate as well as the proper sequence of resuscitation steps, was assessed and analyzed using a questionnaire approved by a neonatologist working for DOW.

[15] The terms “reanimation” and “resuscitation” have the same meaning here and are used interchangeably.

With the exception of Rahovec, **the knowledge level in the facilities where side-by-side training took place was greater than that in the control site of Peja Hospital** (see figure NR-1).

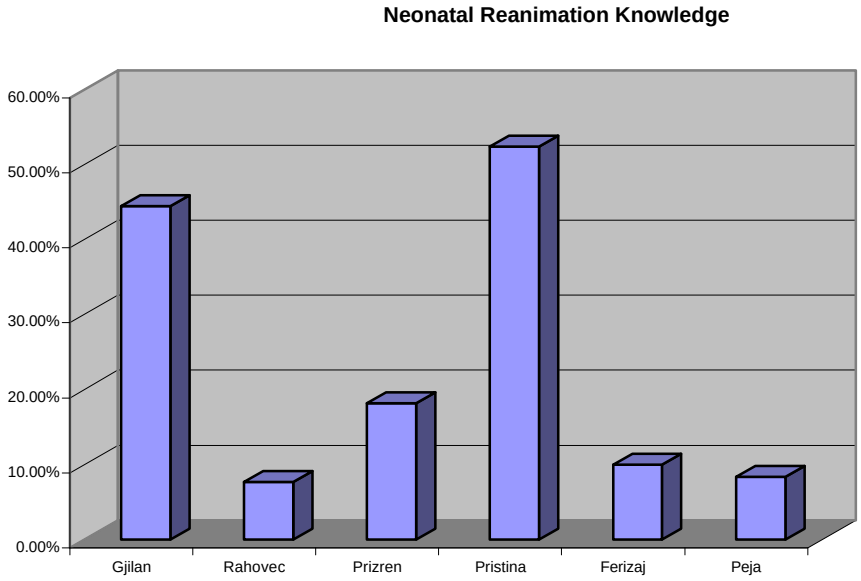


Figure NR-1

Suhareka was excluded from the study, as there were not a sufficient number of hospital staff present at the time of the DOW visit for the data to be meaningful.

It is interesting to note that again, Gjilan and Pristina, the sites with the greatest amount of exposure to neonatal reanimation techniques through side-by-side training exhibited the highest level of knowledge regarding neonatal reanimation. As the scores are low, it is important to note that a score of 100% would mean that all hospital staff interviewed knew all of the methods and the proper order of neonatal reanimation. This knowledge includes being able to correctly name (without prompting) the seven steps necessary for neonatal reanimation, including: place infant on warmer, dry infant, position with neck slightly extended, suction nose and mouth, ventilate with 100% oxygen, obtain heart rate, and perform chest compressions. A score of less than 100% could occur if a physician named all of the steps, but did not put drying the infant and putting it on the warmer in the correct order, for example. Therefore, a score of less than 100% does not necessarily mean that the reanimation effort would fail.

Better knowledge regarding neonatal reanimation not only points to the efficacy of DOW training, but also points to better practice. These improvements could be observed in the early neonatal death (END) rate (discussed at the end of the section). Neonatal reanimation is intricately linked to the early neonatal death rate (and thus to perinatal

mortality rate) as a neonate suffering from several different complications could be reanimated using this technique.

6. Specific Practices in the Care of the Neonate and the Laboring Mother

To evaluate the collective effectiveness of side-by-side training efforts, an observational study to note the presence of specific practices consistent with standard of care for the laboring mother and neonate was undertaken as part of the evaluation conducted in January and February of 2002. A standardized observation form was developed and used to guide observers and to facilitate recording of data. Observers were employees of DOW and were all trained midwives or physicians working on the DOW Health Education Team. Gjilan Hospital, Prizren Hospital, Pristina University Hospital, Suha Reka Health House, Ferizaj Health House, and Rahovec Health House were visited and observations were made of women and neonates in all 4 stages of labor and delivery. Peja Hospital was included as a control. The adherence to specific practices was then noted. Observations were made during daytime hours due to logistics and human resource staffing issues and therefore did not evaluate evening or night shift workers.

Care of the Neonate:
The following were looked for as representative practices, as they are among the most important, and their presence or absence was noted.

A. Auscultation for fetal heart tones between contractions (≥1/hr) during first stage of labor
B. Auscultation of fetal heart tones (≥1/5min) during second stage of labor
C. Skin to skin & start breast feeding
D. Monitoring Temperature of baby

An essential element of caring for the neonate, monitoring fetal heart tones allows clinicians to identify heart rate patterns associated with several different delivery complications, and thus to institute procedures such as oxygenation, amnioinfusion, and delivery. Monitoring should occur during the first and second stage of labor.

Skin-to-skin contact and early feeding promote successful future breastfeeding, and early breastfeeding is crucial, as it may reduce the risk of postpartum hemorrhage. Additionally, skin contact helps to maintain the neonate's temperature and may even correct hypothermia. Prevention and correction of hypothermia (in part through skin-to-skin contact) was a key DOW objective, as initial DOW assessments revealed that as much as 80% of Kosovar neonates suffered from hypothermia within the first two hours of birth.

See Figure OB-1 for a summary of the presence or absence of these practices in 4 sites.

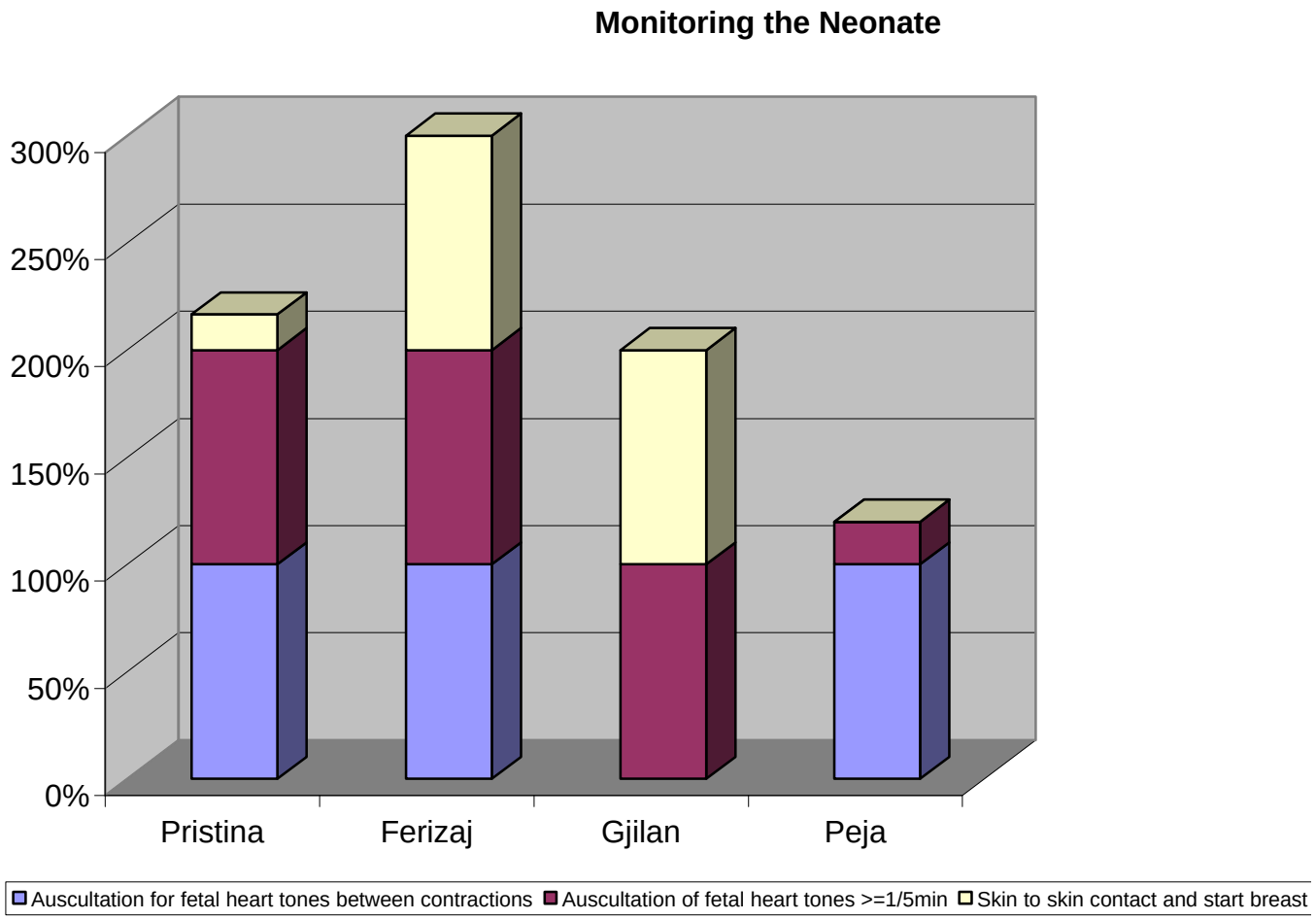


Figure OB-1

A score of 400% would mean that each practice was employed 100% of the time. While consistent employment of the four practices varied, it is clear that overall, they were employed more frequently by clinicians at the sites exposed to side-by-side training. It is also important to note that on the day Gjilan Hospital was observed, only one birth took

place. Therefore, the DOW Health Education Team was not able to observe all physicians, nor did they necessarily witness a representative birth.

Differences were noted in whether or not health professionals monitored fetal heart tones between contractions at least once per hour during the first stage of labor, at least once every fifteen minutes during the second state of labor, and initiated skin-to-skin contact and breast feeding during the third stage. No clinician at any of the sites monitored the neonate's temperature following delivery. Clinicians at Gjilan failed to monitor fetal heart tones at least once per hour during contractions, while this was done at the other three sites. Health professionals at the three sites which benefited from side-by-side training monitored fetal heart tones at least once every fifteen minutes during labor, while professionals at Peja Hospital did not. In addition, professionals in Gjilan, Pristina, and Ferizaj also initiated skin-to-skin contact of mother and baby and initiated breast feeding, while professionals in Peja did not.

It is likely that side-by-side training resulted in improved fetal heart tone monitoring during stage 2 of labor, while it is difficult to draw conclusions regarding monitoring during contractions, as this was practiced in the control site of Peja and not in Gjilan.

It is also likely that the DOW focus on WHO's "Baby Friendly" initiative, which stresses skin-to-skin contact and breastfeeding, resulted in increased practice of this in Pristina, Gjilan, and Ferizaj.

While it is clear that clinicians trained by DOW as well as those who were not trained by DOW would benefit from additional training in monitoring neonates, it is also clear that **DOW likely impacted practice in some key areas, including monitoring of fetal heart tone during stage two of delivery and initiation of skin-to-skin contact and breastfeeding during stage three.**

Care of the Laboring Mother:

As in the case of care of the neonate, practices that should occur in each of the four stages of labor were identified and their presence or absence was noted. However, unlike in the care of the neonate, no statistically significant differences were noted amongst any of the sites, nor were statistically significant differences detected amongst sites in employment of particular practices. All sites appeared to uniformly employ (or not) a practice. The most striking observation was that clinicians at all sites failed to monitor the amount of vaginal blood being lost. However, as noted earlier, it is difficult to draw conclusions, particularly because only one birth was observed at Gjilan Hospital during the study.

The lack of difference could be due to several factors, including chance or improvements in clinical practice at Peja Hospital due to short-term trainings provided by other agencies.

7. Hospital Administration:

Although the impact is not measurable, it is important to note that participation in maternity ward organization and priority determination was a key activity of DOW clinicians. This was partly due to the necessity of strong organization in implementing protocols such as high-risk pregnancy triage, which requires procedures for determining degree of risk and immediate transfer to a tertiary care facility if deemed necessary. Involvement in hospital organization was often limited to the introduction of new administrative procedures, as in Suhareka Health House, where the DOW midwife, with the support of the Hospital Director, instituted the use of the partograph, a chart used to record a laboring mother's progress as well as her vital signs and the fetal heart rate.

DOW clinicians played a major role in maternity ward organization in Gjilan Hospital.

> "As part of the re-organization of the midwife staff in Gjilan Hospital, I had a meeting with the head nurses and team leaders from the different areas in the Maternity Unit. We discussed doing a verbal report with the midwife from night duty on antepartum, post-partum and ICU and making patient assignments in labor and delivery, as well as a morning report. I asked when they planned to implement the changes we discussed and they said "tomorrow". The next day I made rounds to the antepartum, post-partum, ICU and labor and delivery. The head nurses and team leaders had already made rounds with the midwife going off duty. They continue to make rounds on a daily basis and feel that it is very helpful. Also, in labor and delivery, the team leader assigned patients to the 5 midwives working that day. When I checked with the head nurse the next week she said that patient assignments were continuing to be made, even on the night shift. The midwives are very happy as they found it is easier to be responsible for specific patients."
>
> -- *Kathy Morrow, DOW Midwife Volunteer, Gjilan Hospital Maternity*

In Gjilan, DOW clinicians initiated the institution of assigning patients to nurses and midwives, as well as daily case reviews. While the DOW OB/GYN and midwife Team was present in Gjilan, they attended the regular morning rounds, which, due to consistent DOW presence and involvement with staff, evolved into informal conferences regarding complicated cases. Persistent yet friendly questioning changed these perfunctory meetings; reading of notes gradually shifted to introspection concerning quality of clinical care issues. This opened the door to more in-depth case reviews of complicated patients. Case reviews provided an opportunity for discussion of persistent gaps and of situations where practice of procedures taught by DOW led to improved outcomes. In this case, DOW clinician involvement in hospital management reinforced clinical work, and institutionalized the creation of a system that will ensure efforts continue toward reliance on evidence-based medicine.

DOW clinicians in Gjilan also worked with Maternity staff in reorganizing the Department to improve reaction time and referral, and to most effectively use available human resources. After discussion of priorities and best practice, the maternity was divided into the following units:

- High risk pregnancy
- Low risk pregnancy
- Labor & Delivery
- Neonatology
- Postpartum
- Operating Theatre and Intensive Care Unit
- Gynecology
- Outpatient Clinic (included antenatal clinic)
- Family Planning & Contraception

Each department was assigned a chief doctor, resident, and midwives to minimize confusion. To encourage accountability and responsibility, DOW worked with the hospital administration in allocating higher salaries to the chief doctors and nurses.

Once these departments were determined, DOW clinicians worked with each one in developing protocols and standards of care based on evidence based medicine (WHO recommends locally developed protocols). In part, due to extent of DOW involvement in hospital administration and the trust gained as a result, protocols were implemented earlier and adhered to more strictly in Gjlan Hospital than in other DOW training sites. In fact, in February of 2001, **Gjilan Hospital Maternity was designated as the "Center of Excellence" by UNFPA. This designation was based on the integration of health education through the DOW Health Information Center, the existence of an International Health Education Resource Center to update health professional knowledge, the strong organizational structure of the maternity and the emphasis on use of WHO protocols and evidence-based medicine, and the accompanying improvements in practice and outcome.** This honor was certainly due to the efforts of the staff in Gjilan Maternity, and it attests to the incredible improvements made since 1999. It also demonstrates the potential positive results of implementation of evidence-based medicine, and the role that international trainers can play in that process.

8. Establishment of Antenatal Clinics:

As previously explained, elevated maternal and infant mortality rates in Kosovo are partially related to poor antenatal care. To boost demand for antenatal care and to create an efficient referral system, DOW clinicians established antenatal clinics in Gjilan Hospital, and Ferizaj and Prizren Health Houses in late 2001 and early 2002. DOW aimed in particular to address the persistently high perinatal mortality rate (of the two rates that comprise the perinatal mortality rate, early neonatal death rate and stillbirth rate, the stillbirth rate remains high.) Stillbirth, which can be due to failure to diagnose maternal conditions such as diabetes, hypertension, or syphilis, can potentially be prevented through good quality antenatal care.

Each of the three clinics was established by a DOW nurse midwife who trained at least 3 health facility midwives and one gynecologist in elements of antenatal care, such as childbirth, hygiene, diet, and warning symptoms, and detection of malpresentations that may affect labor outcome and timing, among other factors. Each clinic is operated out of

the DOW created Health Information Center, but contains additional equipment, such as hemoglobin meters. They are also equipped with examination rooms. The clinics function as autonomous units, maintaining antenatal cards for each patient, and referring them to the hospital gynecologist when necessary. The midwives have developed cooperative relationships with the gynecologist in each site, screening all patients and preventing unnecessary gynecological visits. The antenatal clinics should increase access to antenatal care, as they provide an informative, client-friendly environment, as opposed to the potentially intimidating and less education-oriented environment of regular gynecological visits.

All clinics are based on the USAID Maternal and Neonatal Health (MNH) program, which promotes focused antenatal care as one of a group of essential maternal and neonatal care interventions that are evidence-based and contribute to the reduction of maternal and infant mortality and morbidity. The USAID MNH program is based on WHO guidelines and incorporates an updated approach to antenatal care that emphasizes quality over quantity of visits.

All of the clinics continue to operate past the DOW intervention, and, as noted by looking at Health Information Center use (as the Health Information Centers have developed into antenatal clinics in the three sites, attendance at the Information Center is equal to attendance at the Antenatal Clinic), attendance continues to increase.

Impact of the Clinics is borne out in the intermediate indicators discussed earlier in the section, as well as those discussed in the Health Information Center section.

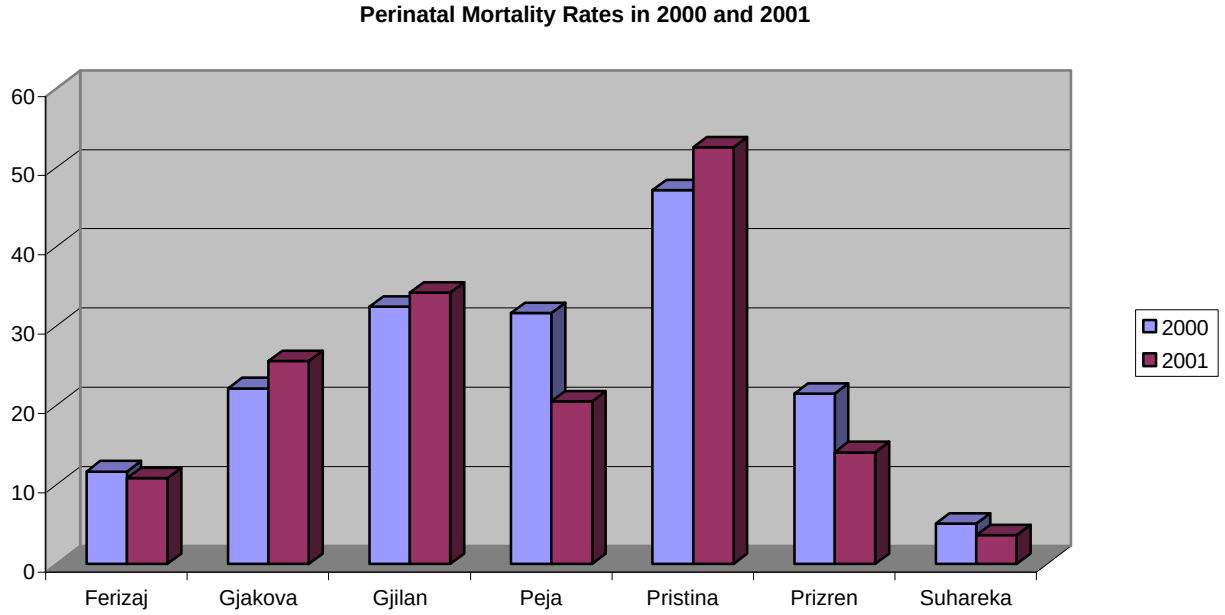
9. Analysis of Mortality Rates

Accurate discussion of mortality rates is difficult, as is the establishment of a connection between these rates and the DOW intervention. This is due to several factors, including lack of data reliability, the high number of births still occurring outside of a health facility, and the existence of confounding factors. For example, improvements unrelated to DOW such as hospital rehabilitation and training provided by other NGOs, population flows related to the crisis in Macedonia, and social dislocation all affect maternal and infant mortality and are unrelated to DOW efforts in the MIH sector.

DOW cannot therefore establish a direct causal relationship between knowledge and practice improvements noted earlier and improvements in mortality rates. However, a presentation of mortality rates provides a basis for later discussion regarding ongoing clinical and policy gaps in Kosovo.

One of the reasons why comparisons are difficult is the lack of reliable baseline data. UNFPA estimated that maternal mortality in 1999 was 30/100,000. However, 1999 is not a particularly appropriate baseline year, as increasing tensions and the accompanying population displacement created unfavorable health conditions. Moreover, in the first half of 1999, most Albanians were giving birth within the parallel health care system rather than in state run health care facilities. Unfortunately, hospital data from 2000 is also

unreliable, due to poor record keeping and disagreements about mortality definitions. One could compare maternal and perinatal mortality rates from 2000 to 2001 and assume that gaps in record keeping and responsibility for mortality remain constant. However, this is not necessarily the case, as training in evidence-based medicine encouraged more careful and honest record keeping, in some cases making mortality rates for 2001 appear worse than those for 2000. In any case, a comparison of official perinatal mortality rates (as reported by WHO and UNICEF) for facilities in which DOW worked as well as Gjakova and Peja (as controls) follows:



Comparisons are inconclusive, and changes in rates could result from any one of the reasons related to data recording stated above. Increase in perinatal mortality in Gjilan is partially related to a decreased rate of referral of complicated cases to Pristina which, as the tertiary reference hospital has the highest perinatal mortality rate in Kosovo. 2.35% of all neonates were transferred from Gjilan to Pristina in 2000, while 1.40% were referred in 2001.[1] Moreover, refugees from Macedonia negatively affected perinatal outcomes in Gjilan Hospital in May of 2001, when the stillbirth rate was 32.9 per thousand, 189% of the average for the rest of the year.[2]

In addition, the reliability of this official data and consistent use of definitions are called into question when one compares data from the DOW Labor and Delivery Outcomes Database. For example, according to the Labor and Delivery Database, the perinatal mortality rate of Gjilan was 23.97 per thousand for 2001, and according to the WHO and UNICEF data, it was 34.28. Indeed, the WHO and UNICEF data is generally considered to be unreliable by international experts working in Kosovo. Unfortunately, one reason for this is that regional hospitals fear that reporting accurate statistics may lead to unpleasant

[1] Source: DOW Labor and Delivery Database
[2] Source: DOW Labor and Delivery Database

reactions from UNMIK or Kosovar health authorities. Therefore, data included in the WHO/UNICEF report is labeled as "reported data" throughout. Moreover, all neonates referred from a regional hospital to Pristina who die in Pristina are attributed as a regional hospital mortality. This occurs even if the parents bring a child directly to Pristina without passing through a regional hospital. For example, if parents from the Prizren region want to seek the "best care" by giving birth in a tertiary care facility and the infant dies in Pristina, the death is attributed to Prizren, even though the infant was never in Prizren Hospital. Attributing mortality in such a way is contrary to WHO standards.

Therefore, perhaps the most accurate way of comparing mortality rates is by comparing rates within the DOW database, as DOW staff have ensured that definitions regarding conditions and mortality rates are consistent. The drawback is that DOW only has comprehensive data for Gjilan and Prizren, the sites with higher level DOW involvement toward the end of the project, as the other sites are reporting data directly to IPH.

A comparison of perinatal mortality rates, early neonatal death rates, and stillbirth rates for Gjilan and Prizren, according to the DOW Labor and Delivery Database follows.

ANNEX 2

Reproductive Health Curriculum for Health Education Training

Reproductive Health

Curriculum

for

Health Education Training

DOCTORS OF THE WORLD – USA
Prishtina, Kosovo.

Index

Introduction

Reproductive health is a community affair, therefore:
It is not enough to think of women as beneficiaries of the Doctors of the World program; they must also be afforded the opportunity to participate fully in these programs. Women must be part of the process of analysing their own problems, identifying potential solutions and implementing the remedies. Without full participation of women, they cannot adequately be protected, nor can satisfactory solutions be found for their problems and those of the community.

What is reproductive health?
A state of complete physical, mental, and social well being, and not just the absence of disease or infirmity, in all matters relating to the reproductive system and its function and processes. (WHO)

Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.

Reproductive health is an essential element of the long-term physical, intellectual, social and economic wellbeing of any society. It is a basic determinant of the health of future generations.

Many countries today, are faced with the challenges of high maternal morbidity and mortality, Kosovo is one of the highest in Europe, with maternal mortality as high as 509 / 100 000 (UNFPA, 2000).

In Ashkali communities, one of the contributing factors to this high mortality is that a large number of women live in isolation, and do not access health care, resulting in giving birth to their children at home, often in unsafe surroundings, lacking trained health personnel. Other factors which put Ashkali women at high risk of developing health problems, is that they often start having children from a very young age, and have many children. These two factors place women in a very vulnerable position in terms of health, as well as the economic challenges faced by a family when having a large family.

Doctors of the World (DOW), through their Minority Reproductive Health project aims to provide the Ashkali community with the necessary skills and knowledge to be able to improve their health, by training peer health educators to provide health education to members of their own community.

It is important to note that health education is one component of the health promotion framework. Health promotion also encompasses other issues such as: community

participation, healthy public policy, reorientation of health systems and safe environments. DOW understands that the situation within Ashkali communities often lacks these important components, which when combined, can facilitate a healthy community. By advocating on behalf of the community DOW will attempt to involve other partners (UNHCR, UNIFEM, KFOR, UNMIK) to address issues, which fall outside of DOW's resources and capabilities.

DOW's approach will include the community from the initial phases of the project, encouraging community participation in all decision-making processes, allowing the community to identify their needs, and to design the project to meet these needs. It is envisaged that the final result of this project will provide a sustainable health education project, which will involve members of the community, and promote better health outcomes.

Overview
Objectives:

- ***Make participants feel welcome.***
- ***Introduce training team (facilitators and assistants)***
- ***Present an overview of the workshop goals, objectives and training methodologies.***
- ***Review the workshop logistics.***
- ***Determine participants' capacities for contributing to the training.***
- ***Determine participants' expectations.***
- ***Agree on schedule, decide together on rules or "norms' for the training.***

Content:

- Welcoming speech by organisers (DOW).

- Presentation of workshop goals, objectives, training methodology.

- Goal: To improve the health of the community, in terms of reproductive health, through the vehicle of health education.

- ***Objectives:***

- ***To inform participants of the role of a peer health educator.***
- ***To provide participants with knowledge on reproductive health issues.***
- ***To provide participants with knowledge and skills relating to health education methods, to enable them to deliver health education sessions in their community.***
- ***To enable participants to develop the skills and knowledge necessary to be health resource people in their community.***

- Introduction of training team.

- All members give a brief introduction of themselves, and describe their role in the workshop.

- Workshop logistics

- Review the logistics for the workshop. Inform participants of hours of training, provision of food and drink, breaks for lunch etc.

- Establish an opportunity for participant introduction, background, training and experience.
- Use icebreakers. Eg. Participants talk in pairs for a minute and introduce each other.

- Solicit expectations of the workshop from the participants.

- Ask participants to state what they expect from the workshop training. Write these responses on a large piece of paper and place on the wall for the duration of the training. Each day, review the list and ensure the participants' needs are being addressed. Tick off each one as it is achieved throughout the training workshop.

- Agree on schedule, workshop norms.

- The training will consist of two components. Health Education methodologies, and Reproductive Health information.
- Review the proposed schedule and ask for suggestions, agree on timeliness, active participation, allowance for different learning styles / language constraints.
- Participants should be encouraged to participate throughout the workshop and made to feel that they are included in the decisions being made about the training. Eg. What time do they want to break for coffee?

Session 1. Community Participation

Objectives:

- ***Focus on the community's role in promoting reproductive health.***

Ask the group what they think a community is, allow them to voice their opinions.

People who share common interests and have the feeling that they belong together form a community. In a community people usually share common values, a common history (or background), and accept certain forms of behaviour as normal for all community members. Some health-related problems can be solved by individuals alone. To solve others, the cooperation of many people is needed.

To achieve effective participation by the community and individuals, two things need to be done. Governments need to facilitate more community involvement in decision-making and people need to be informed of their potential for improving their health through their own efforts.

Much can be accomplished for women's reproductive health through community participation. Through the provision of support across the community, from family to health workers, women should be able to achieve a safe level of health. Community members, once aware of the issues relating to reproductive health, can contribute to the promotion of a healthy environment for reproductive health.
The formation of women's groups should be encouraged to promote discussion of important health issues, and this information shared amongst families.
Access to health care by skilled health professionals, regular antenatal care should be encouraged, and access to free contraceptives should be a fundamental component of any community's strategy towards good reproductive health.

Community representatives should be encouraged to communicate with local municipality members, and other influential organisations to ensure equitable distribution of health resources.

By uniting as a community and having one voice, the participatory community approach can be a very successful vehicle to achieving good health, and should be encouraged. Enabling communities to gain the skills necessary for the safeguard and promotion of health is a major objective of health education. Through community involvement, lay and professional people study health problems, pool their knowledge and experience, and develop ways and means of solving the problems. DOW's role is to help the community organise itself so that learning will take place and action will follow.

Ask the group what they think their community could do to participate towards improving the health of their population.

Examples: Form a health committee, lobby local municipality for improved rubbish disposal, water sources, access to health care, organise a health campaign, and special community events.

In small groups, participants discuss how they would like to see their communities change to improve women's lives and health during the nest 10-20years. They each develop their own personal vision, and then share this with the large group.

Session 2. Reproductive health.

Objectives:

- ***Define health.***
- ***Define reproductive health.***
- ***Introduce reproductive health topics to be discussed in this training.***

- ***Define health:***

Read the following definition to the group (or ask one of the group to read it).

World Health Organisation (WHO) defines health as:
A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.

Using a random selection of pictures, spread out on a table, ask each member of the group to select a picture, which represents health to them. Ask them to explain why they selected the particular picture to the group. Repeat this process, but select a picture, which represents poor health. Then ask the group to choose a picture that they agree best represents the groups' idea of health.

To promote discussion, ask the group to describe aspects of their community, which do and do not promote health. (you may like to use a flipchart with two columns, one with 'health' as a title, and one column with 'unhealthy' as a title.)

Using groups of 4-5 participants try to make a list of 7-12 things people need to be healthy. They then create pie graphs that represent these needs and the weight of these needs. Then they are shared in the large group.

- ***Define reproductive health:***

Ask the participants what they think reproductive health is. List their responses on the flipchart.
Read the following definition. (or ask one of the participants to read the definition if possible)

World Health Organisation (WHO) defines reproductive health as:
A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and processes.

Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capacity to reproduce and the freedom to decide if, when, and how often to do so.

The rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for the regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.

The issue of reproductive health throughout the world is very important. The global situation of women, in terms of reproductive health, 585 000 women die each year – one each minute- from pregnancy related causes. Ninety-nine percent of these deaths occur in developing countries. Girls aged 15 – 19 years are twice as likely to die from childbirth as women in their twenties. Those under 15 are five times more likely to die from childbirth. 120 million women say they do not want to become pregnant, but are not using any method of family planning. 20 million unsafe abortions occur every year – 55 000 each day- resulting in some 80 000 deaths and hundreds of thousands of disabilities. (WHO, 1998).

In the large group, brainstorm all the different health problems women may have that are related to their reproductive health. Write these on the flip chart paper. Then ask the group to identify whether or not that health problem can be prevented. Put a star by each one that can be prevented. Now ask them to describe who would prevent it and how a health worker could help prevent these problems.
Conclusion: Most problems are preventable. Health workers can take all sorts of actions to play a preventative role in their community.

- ***Introduce reproductive health topics to be discussed in this training.***

- Introduce each of the reproductive health topics, which will be covered in this training.
- Growth and Development, Anatomy, Menstruation, Conception, Pregnancy, Birth Process, Postnatal, Breastfeeding, Normal Baby, Family Planning, Contraception, Sexually Transmitted Infections (STI's), Unplanned pregnancy, Men's role in reproductive health.

Session 3. Growth and Development.

Objectives:

- ***Identify growth and development across the lifespan.***
- ***Identify special needs and responses for adolescents.***

Puberty:

Define puberty, and discuss the physical and emotional changes that take place at this stage.

- Ask the group what changes take place when girls and boys are entering puberty.
- List should include: Females – height increases, acne, breasts grow, pubic hair appears, menstruation begins. Males – height increases, more muscle definition, pubic hair appears, voice deepens, acne. Both males and females may feel uncomfortable with the changes that take place in their bodies during puberty, which may result in feeling ashamed, or confused. It is important for young men and women to have support from family and friends when going through puberty.

Adolescence:

Young people have special needs, and each age group within this population has different problems and requirements. Young people are tremendously resourceful, flexible and

energetic, and need to be recognised as an important subgroup of any community. It is important to note the following:

- Adolescence is a time for learning about close relationships.
- Young people often lack a well-developed future orientation. (eg. Having unprotected sex once, will not effect my future, even though it could result in an unplanned pregnancy)
- Young people are not a homogenous group.
- In many countries with high STI /HIV prevalence, the most vulnerable group is young women.
- Adolescents need positive role-models in the community.

Adulthood:

Young adulthood is the stage in life when most men and women make long-term commitments to relationships, and choose a partner to marry. Middle adulthood is a time when people develop an interest in guiding the next generation. Late adulthood is the time when women experience the Menopause, which means that their bodies go through changes, they stop menstruating, which means they are no longer able to have children.

Session 4. Anatomy.

Objectives:

- ***To inform the participants of the male and female reproductive system and its functions.***

Introduce this session, explaining that it is important to have an understanding of the male and female reproductive organs, in order to understand how our bodies function.

Using the drawings of the reproductive system, explain using simple words where each of the organs are found in the body, and then look more indepthly at each. When explaining the female anatomy, start with the location, (point to your own body / or the pictures) so that participants understand where in their bodies these organs are found. Provide the name of each organ and ensure participants understand the name.

Also use the plastic model of the uterus, and allow participants to handle this model and become familiar with it.

Female reproductive organs:

- External genitalia – The woman's genitals are protected by pubic hair and soft lips, known as labia. When parted, these labia are covering the openings of the bladder, known as the urethra, where urine is passed, and the vaginal opening where blood and mucous is passed. This region is called the vulva. The clitoris is also found in this area, situated above the urethra. The clitoris provides the woman with feelings of sexual pleasure.

- Breasts – Primary function is for breastfeeding. It is normal for breasts to be different shapes and sizes, and every person has different shaped breasts. Breasts start to produce breast milk during a pregnancy in readiness for the birth of the baby. They will continue to produce milk for as long as the baby suckles the breast.

- Vagina – The vagina is the passageway from inside the female reproductive organs to the outside of the body. This is where babies come out of when they are born, where mucous and blood flows from during menstruation and where the penis is placed during sexual activity. The vagina is a long tube about 8cms long. It leads from the cervix down to the vulva, where it opens between the legs. The vagina is very elastic so it can easily stretch around a man's penis, or around a baby during labour.

- Uterus / womb – This organ is found at the bottom of the abdomen, inside the pelvis. The uterus is connected to the vagina, and the opening from the uterus into the vagina is called the cervix. The uterus is where babies grow and develop during pregnancy. The uterus is made of special muscle that grows larger as the baby grows larger during the pregnancy, and then shrinks back to pre pregnant size after the baby is born. The normal size of the uterus, is the size of a small fist. When the woman is not pregnant, it is the inside lining of this organ, which comes away every month and causes bleeding, known as menstruation.

- Cervix – This is the neck of the womb. It is normally all but closed, with just a small opening through which blood passes during the monthly period.

- Fallopian Tubes – These are 2 tubes, which extend from the uterus towards the ovaries. The role of these tubes, is to help the female egg which is released from the ovary every month, get to the uterus. Small hairs inside the tube, carry the egg along the tube, pushing it towards the uterus. If the woman has had sex, and there are male sperm inside her, then the sperm can move up into the uterus and tubes and join with the egg inside the tube. Then the egg and sperm join together and move into the uterus to grow into a baby.

- Ovaries – Each woman has two ovaries, one on each side of the uterus, which are positioned next to the opening of the Fallopian tubes. The role of the ovary is to make and release an egg each month. If this egg is joined with a male sperm

inside the woman, then a pregnancy may take place. If there are no male sperm present inside the woman at the right time of the month, then a pregnancy will not occur. When this happens, the lining of the uterus, which has been getting thick to prepare for a pregnancy, will shed, resulting in bleeding, which is the monthly menstruation. The release of the egg is called 'ovulation' and is often felt as a sharp pain on the side of the abdomen where the ovary, which is releasing the egg, is situated. The egg is very small, the size of a pinhead.

Energizing Activity – Fruit Salad
In a circle, people count off using 4 kinds of fruit: banana, pineapple, orange and apple. Then the facilitator stands in center, and calls out a name of a fruit and those fruits must change places. Make sure these is one less chair than participants, so that one person is left without a seat and gets to initiate the next round.

Male Reproductive System

Unlike the female reproductive system, the male reproductive system is situated outside of the body and is easily distinguishable.

- Penis – The penis is the most obvious piece of the male anatomy. The penis is made of erectile tissue, which acts like a sponge and when it becomes filled with blood, the penis becomes hard and erect, necessary for sexual activity. The penis is also used to pass urine from the bladder to the outside of the body.

- Urethra – The urethra is a tube running down the length of the penis from the bladder, through the prostate gland to an opening at the tip of the penis. Sperm also travel down the urethra to be ejaculated during sexual activity.

- Vas Deferens – This tube carries sperm from the testes to the prostate and other glands. These glands add secretions that are ejaculated along with the sperm.

- Scrotum- This is the bag of skin which hangs outside the body and contains the testes. It helps to keep the testes at a constant temperature just below the temperature of the rest of the body. This is necessary for sperm to be produced. In heat, the scrotum hangs down, away from the body, to keep the testes cool. When it is cold, the scrotum draws up closer to the body for warmth.

- Testes – There are two testes. This is where the sperm are produced and stored.

Participatory Evaluation
In a circle, each participant uses one word to describe how they are feeling about the workshop so far.

Session 5. The Woman's Monthly Cycle
Objective

- ***Explain the woman's monthly cycle / menstruation.***

Use the pictures and posters to support your explanation.

Monthly cycle / Menstruation:

- Each month a ripe egg, or ovum, is released from one of the ovaries. This is called ovulation. The 'finger's at the end of the fallopian tube help to direct the egg down into the tube. At the same time, the lining of the womb begins to

thicken and the mucous in the cervix becomes thinner so that sperm can swim through it more easily.

- The ripe egg begins to travel down the fallopian tube. It is here that it may be fertilised by a man's sperm if a couple have intercourse at this time. By now, the lining of the womb is thick enough for the egg, if it is fertilised, to be implanted in it.
- If the egg is not fertilised by a sperm, it passes out of the body through the vagina. It is so small it cannot be seen. The lining of the womb is also shed in the monthly period of bleeding (menstruation).

All women experience different cycles. The normal cycle is 28 days, and bleeding occurs for 4-7 days. Some women experience pains, nausea and heavy bleeding while menstruating, others have no problems at all. It is important for all women to keep a record of their cycle so they are aware of any changes that may indicate pregnancy or other problems.

There are only certain times during a woman's cycle that she is ready to become pregnant. This is around the time of ovulation, when an egg is released. Because all women are different, ovulation takes place at different times in all women. In a woman who has a 28-day cycle, it can be assumed that from day 10 – 18 of her cycle, she could become pregnant if she has sex and male sperm enters her inside. By using the days and counting and also using the changes in vaginal mucous which are coming away from her, the woman can use these signs to become pregnant or to avoid a pregnancy, by using protection (condom) or abstaining from sex during this time. The changes that take place in the vaginal mucous during the ovulation time are obvious to the woman. The mucous becomes more fluid and sticky, and when placed between the fingers is quite sticky and stretchy. This thin stretchy mucous, makes it easier for the sperm to swim up inside the female and join with the egg.

Knowledge of this cycle can help women and men to plan their families, and also assists when a couple is having difficulties in conceiving a baby. By understanding a little about how the body works, it is easier to work with it, than against it. If couples are having difficulty conceiving, they should be encouraged to seek medical assistance from a doctor.

Session 6. Conception

Objective

- ***Explain the process of conception.***

Once again, use the pictures and flannelgraphs to support your description of conception.

At the end of this session, ask some members of the group to explain conception using the flannelgraph.

A woman is most likely to conceive just after the time she ovulates – when an egg has been released from the ovary. During sexual intercourse, sperm are ejaculated from a man's penis into the woman's vagina. In one ejaculation, there may be more than 300 million sperm.

Most of the sperm leak out of the vagina again, but some begin to swim up through the cervix. At the time of ovulation the mucous in the cervix is thinner than usual to let the sperm pass through more easily. The sperm swim into the womb and so into the fallopian tube. One sperm may then join with the egg and fertilise it. Conception is said to have taken place.

During the week after fertilisation, the egg moves slowly down the fallopian tube and into the womb. It is already growing. The egg attaches itself firmly to the specially thickened womb lining and starts to slowly grow into a baby. This process takes nine months.

Session 7. Pregnancy

Objectives:

- ***Explain the signs of pregnancy to participants.***

- ***Explain the discomforts of pregnancy.***
- ***Explain the risk signs which may occur during pregnancy.***
- ***Explain the warning signs of pregnancy.***
- ***Explain the common complications of pregnancy.***
- ***Increase participants' knowledge of how to promote having a healthy pregnancy.***
- ***Explain the importance of antenatal care, and delivery in a safe environment.***
- ***Explain the man's role during pregnancy.***
- ***Assist the participants to develop a strategy for accessing antenatal care from a health professional, and transferring to a secondary health facility for delivery of their baby.***

Warm-up activity
Each person writes or remembers the most important, exciting or upsetting event that has happened during the last six months in their lives. Then they share in pairs and in the large group a few volunteers share their stories. Facilitators should be involved in this activity also.

- ***Explain the Signs of Pregnancy to participants.***

This session should be started with a discussion. Most women will know the signs of pregnancy. Ask the group to participate by explaining signs and symptoms they felt when they were pregnant, or have heard other women discuss. With each suggestion, give a brief outline of the reasons for this change occurring in their bodies, as this will help the participants to understand how the body changes during pregnancy. Use the pictures to show the changes that take place in the woman's body throughout the pregnancy. Be sure to include an explanation of how close the reproductive organs are to each other, and how small the area inside the pelvic cavity is, for example, the closeness of the uterus to the bladder.

It is important to explain to the group that many changes take place in a woman's body during pregnancy, both physically and emotionally. Many of these changes are due to special hormones produced when a pregnancy occurs. These hormones are known as progesterone and oestrogen, and they affect the body in many ways.

Possible signs of pregnancy:

- Early breast changes - These often occur at 3-4 weeks, but this is not reliable in women who have had many children.

- Monthly Bleeding stops (Amenorrhoea) - This is often the first sign of pregnancy. If conception has taken place, then there will be no bleeding, as the lining of the uterus will stay intact to provide a place for the baby to grow.

- Morning sickness – This can occur from conception to approximately 14 weeks into the pregnancy. It is a feeling of nausea and often accompanied by vomiting. Some women only experience it in the morning, while others have feelings of sickness all day and night. The hormones of pregnancy are thought to cause this phenomenon.

- Bladder irritability – The woman often feels the urge to empty her bladder frequently for the first 6 - 12 weeks of the pregnancy. This is due to the position of the growing uterus pressing on the urinary bladder. Once the uterus grows above the bladder, the frequency feeling goes away. *(Use the pictures to explain how close the uterus and bladder are inside the pelvis)*

- Quickening (baby movement)– This is a sign felt at around 16 – 20 weeks of pregnancy, and is the feeling of the baby moving around inside the woman's abdomen. It is often difficult for first time mothers to tell the difference between this feeling and wind. This can be a helpful way to know how many months pregnant a woman is, if she can feel her baby moving then you can assume she is around 16 – 20 weeks pregnant.

Probable Signs of Pregnancy:

- Urine /Blood test - Presence of a special hormone that only appears when there is a pregnancy. It can be detected by testing the blood or urine of the woman.

- Uterine growth – When a baby begins to grow inside the uterus, the uterus itself begins to grow. From 8 weeks of pregnancy, the uterus can be felt from the inside, and feels larger than normal, and from 12 weeks can be felt externally by feeling the abdomen.

- Braxton Hicks contractions – These are the contractions that occur in the uterus and are felt by the woman as 'tightenings', which make the uterus go very hard. These usually start from 16 weeks onwards, but become more frequent and can become painful towards the end of the pregnancy. Some say it is the body's way of practicing for when the true labour contractions begin. These contractions are usually irregular in occurrence and often associated with back pain, and will go away if the woman lies down and rests.

- Feeling the baby – From 16 – 28 weeks, the baby can be felt inside the uterus by gently feeling the abdomen. An experienced health professional can tell what position the baby is lying in, and how large or small the baby is. It is possible to feel the head and back of the baby, and also the arms and legs. Feeling these bodily parts is a good way to diagnose a pregnancy.

Positive Signs of Pregnancy:

- Hearing baby heart sounds – From very early on in the pregnancy, 6 weeks using ultrasound and 16 – 20 weeks using a special stethoscope the baby's heart sounds can be heard. This confirms the pregnancy and is also reassuring for the mother to hear the sound of her baby's heart beating.

- Seeing the baby – This can be done using an ultrasound machine or x-ray machine. X-rays are not recommended in pregnancy though. Using an ultrasound machine allows the doctor to see the baby inside the uterus. This is useful for assessing the baby's well being and for working out when the baby is due to be born. Frequent ultrasounds are not necessary if the pregnancy is normal. It is not known what long-term effect frequent ultrasounds have on a developing baby.

- Baby movements can be felt and seen – From 22 weeks of pregnancy, it is possible to feel the baby moving inside the uterus, by placing your hands on the woman's abdomen. Towards the end of a pregnancy, the movement of the baby can be easily seen as it turns around inside and causes the belly to move as it kicks and wriggles.

- ***Explain the discomforts of pregnancy:***

Most of the discomforts of pregnancy are due to the action the specific pregnancy hormones have on the woman's body. Most of the discomforts of pregnancy are not harmful, but make the woman uncomfortable at different times of her pregnancy, which is when she needs support from her family and friends.

Ask the group to give examples of some of the discomforts they felt when pregnant. This is a good opportunity for getting the men involved and encourages experiential learning and participation.
Using one of the male participants (if he is willing) dress him up in a heavy/ hot dress, and hang 10 kgs of oranges over his shoulders to represent the extra weight of the baby and breasts. Ask him to walk around the room and stand around until the end of this session, when you will ask him to tell the group how he feels.
Materials needed for exercise:
10 kgs of oranges in bags of 5 kgs each (2 bags)
1 heavy coat or dress.

Discomforts of Pregnancy:

Nausea and vomiting

Nausea (feeling sick) is common during the first part of the pregnancy and usually goes away by the 14th week. Causes include hormonal changes, poor dietary habits or strong feeling of anxiety about being pregnant. Mild to moderate nausea and vomiting pose no threat to the baby. If vomiting is severe, dehydration is a

risk, then medical help is necessary and the woman should visit a doctor for treatment.

Helpful Hints:

Eat small frequent meals, eat dry crackers before getting out of bed in the morning, avoid greasy, spicy foods, and eat high protein snacks like nuts and yoghurt.

Constipation

Constipation during the later stages of pregnancy is common and usually a minor problem. Usually caused by the uterus pressing on the bowel and the movement of the bowel slowing down.

Helpful Hints:

Drink more fluids, eat more fruit and vegetables, high fibre cereals, daily exercise like walking.

Heartburn

Heartburn is common during the last 12 weeks of the pregnancy. The pressure of the growing uterus on the stomach pushes the acid in the stomach into the throat, causes the burning feeling.

Helpful Hints:

Eat small, frequent meals throughout the day, avoid greasy, spicy food, limit caffeine intake, avoid lying down at least 2 hours after eating, wear loose fitting clothes, drink plenty of water, sleep with the head of the bed raised.

Backache

Pregnant women commonly complain of backache. The pain may be caused by the strain placed on the lower back from the weight of the growing uterus, lifting poorly and bending repetitively and from the hormones of pregnancy.

Helpful Hints:

Take a warm bath, wear supportive shoes, not high heels and be careful when lifting.

Other causes of back pain which are not normal are; kidney infection, pelvic infection, and preterm labour, all of which require that the woman visit a doctor for treatment.

Urinary Frequency

Urinary frequency increases in pregnancy. In early pregnancy this is due to hormones. In the later part of pregnancy this is because of the enlarging uterus pressing on the urinary bladder.

Helpful Hints:

Drink plenty of fluids (more than 2 litres per day) and empty her bladder frequently.

It is important to rule out whether this is normal or an infection – pain with urination, urgency, and blood in urine, bad smelling urine, kidney pain and fever. In this case, she should visit a doctor for treatment.

Oedema

During normal pregnancy, many women experience clinical oedema (swelling). This is due to chemical changes in the blood and from uterine pressure on the major vessels in the pelvis. Clinical oedema in pregnancy is characterised by swelling in the lower legs, particularly after periods of standing or sitting and are present from the middle of pregnancy through to the end.

Helpful Hints:

Avoid long periods of standing or sitting, avoid too much salt in the diet, drink plenty of fluids (water) and elevate the feet above the level of the chest (heart) for 1-2 hours twice a day.

It is important to note that if oedema does not lessen with rest, then the swelling may be a sign of a hypertensive disorder of pregnancy or a heart problem. If a woman develops symptoms such as; generalised swelling seen in the hands and face, high blood pressure, protein in urine and headaches and/or heartburn then she must see a doctor immediately as this could be a very dangerous situation.

Headache

Headache is the most common symptom in pregnant women. Headaches don't usually cause any harm to the mother and baby.

Helpful Hints

Eat frequently and avoid missing meals, drink enough fluids and suggest plenty of rest and sleep. Do not take aspirin for pain relief, this is no good when pregnant. If the headache is severe, she has other symptoms such as 'flashing lights' in front of her eyes, and the swelling previously mentioned, then this could be a serious condition called preeclampsia, which is dangerous for both the mother and the baby. She must visit a doctor immediately.

Varicose Veins

Varicose veins are twisted, swollen, enlarged, and knotted superficial veins. Pregnancy can make pre-existing veins worse or can promote development of new veins and are mainly found in the legs, feet, vulva and anal areas. Women with varicose veins may complain of pain, aches, swelling and a feeling of heaviness in their legs and feet, vulval area.

Helpful Hints

Avoid long periods of standing and sitting (more than 1 hour at a time without walking around), she should elevate her legs at least 30 minutes twice per day and avoid wearing clothing that are tight. A woman with varicose veins is at risk of developing thrombophlebitis (blood clots), if she develops a hot, red, painful lump in her legs she should see a doctor straight away, as this can become very dangerous.

- ***Explain the risk signs which may occur during pregnancy.***

Pregnancy is a natural occurrence amongst the human population. However, it is also responsible for the death of 585 000 women each year, one every minute, who die of pregnancy related causes. Many of these causes are quite preventable or easily managed if women are aware of the risks they are placing themselves at, by becoming pregnant. Most maternal deaths result from haemorrhage, complications of unsafe abortion, pregnancy-induced high blood pressure, sepsis and obstructed labour.

Risk factors for complications in pregnancy.

Age

As mentioned previously girls aged 15 – 19 years are twice as likely to die from childbirth as women in their twenties. Those under 15 years are five times as likely to die from childbirth.

The ideal childbearing age is 20 – 34 years of age, with a slightly increased adverse perinatal outcome for mothers younger that 20 years or older than 34 years. If less than 17 years old or more than 35 years old, the mother must be warned of the risks of high blood pressure during pregnancy, premature labour and diabetes amongst others.

Height

Short stature can be associated with a small pelvis and therefore an increased risk for prolonged labour or the baby not fitting through the pelvis. If a woman is less than 145cms in height, she should be encouraged to plan to deliver her baby in the safety of a hospital.

Weight

Pre-pregnancy weight and pregnancy weight gain are significantly related to the birth weight and therefore the health of the baby. A low pre-pregnancy weight and an inadequate pregnancy weight gain are important indicators of poor nutritional status. An inadequate pregnancy weight gain can have many effects on the baby. Lack of nutrition in the first 2 months of pregnancy can cause permanent damage to the baby and abortion. After the first 2 months of pregnancy, poor nutrition can lead to intrauterine growth restriction and affect the baby's brain development. Malnutrition during pregnancy can increase the risk of preeclampsia (high blood pressure in pregnancy), premature rupture of the membranes (bag of waters), and preterm labour. Excessive weight gain can cause problems with the baby fitting through the birth canal and associated birth trauma, and these babies are also at risk of obesity in later life.

Using the diet pyramid, explain the importance of eating a well-balanced diet consisting mostly of breads, pastas and cereals, fruit and vegetables (particularly ones rich in iron and folic acid as they benefit the developing baby), proteins such as red meats, fish, white meats, nuts and beans, small amounts of oils and fats and only very small amounts of sugars, chocolates.

Obstetrical history

These are the events, which have taken place when a woman has been pregnant before this pregnancy. Information that is very significant and increases a woman's risk is a history of; previous pregnancy loss or losses (stillbirth/spontaneous abortion), multiple gestations (twins, triplets), previous labour or delivery problems such as forceps delivery or caesarean section, too much bleeding, infection.

Medical History

It is important to note any acute or chronic medical problems. If the mother has a medical condition such as diabetes or diseases of the heart or kidneys, the risk of having a problem with the baby increases and a doctor must see her.
If a woman is anaemic (low level of red blood cells) she and her baby are placed at risk. The baby is at risk of being too small, and the woman is at risk of bleeding too much when her baby is born, among other risks. It is important a woman eats foods rich in iron (green leafy vegetable, red meat) and takes iron and folic acid supplements, which she can get from visiting the doctor. A woman should not take any medication or treatment unless a doctor has ordered it. Many drugs cannot be taken when pregnant, as they are dangerous to the growing baby.

Blood Type

It is important to know a woman's blood type early in the pregnancy. She needs to know if she is Rh negative or positive. If she is Rh negative, she needs to know that it is important she visits a doctor during her pregnancy, especially if she has any bleeding. She will need to have a special injection which will protect her baby and any babies she may have in the future.

Social Problems

Smoking / Alcohol

Practicing any kind of substance abuse increases the risk of pregnancy complications in the childbearing woman and the risk of physical and mental outcomes in her baby.

Smoking-

Increased complications for the woman:

1. Infertility (unable to become pregnant)
2. Ectopic pregnancy (pregnancy outside of the uterus)
3. Spontaneous abortion
4. Placenta praevia (placenta grows over the opening of the uterus)
5. Placental abruption (placenta comes away from the wall of the uterus)
6. Premature rupture of the membranes (bag of waters breaks early)
7. Preterm delivery (baby born too early, before 36 weeks)

Increased complications with the baby:

1. Low birth weight
2. Increased chance of dying.
3. Prematurity and the risks associated with this.

4. Congential urinary tract abnormalities.

Alcohol-
Alcohol can cause adverse effects on the unborn baby and depend on factor such as genetics, time of exposure and the amount of alcohol taken.

Increased complications for the woman:
1. Infertility
2. Spontaneous abortion
3. Placental abruption

Increased complications with the baby:
1. Foetal alcohol syndrome (FAS) – This includes growth restriction (small baby), head and face abnormalities, and nerve disorders.
2. Alcohol related birth defects which can include major malformations, decrease immune function, deafness, and developmental problems.
3. Baby doesn't grow enough inside the mother.
4. Low birth weight
5. Prematurity

Poverty

Factors such as poor living conditions, poor hygiene, inadequate income and limited educational level are all related to pregnancy risk, such as premature birth, high blood pressure in pregnancy and spontaneous abortions.

After this role-play, using the picture cards, ask the group to arrange them into 'healthy' and 'unhealthy' categories, and then ask them to explain why these are right and wrong.

- ***Explain the warning signs of pregnancy.***

Warning signs or danger signs in pregnancy cannot be ignored. These signs are a threat to the baby and the woman's well being, and if ignored may result in the death of the baby and/or mother. If any of these signs occur in a pregnant woman, she needs to be seen by a doctor immediately, going straight to the Health House or Hospital.

Ask the group if they know what some of the warning signs of pregnancy might be. Explain further what each warning sign is.

Warning Signs in Pregnancy

- Vaginal bleeding - Any type of bleeding from the vagina during pregnancy is not normal and should be investigated by a doctor immediately. It doesn't

matter if the bleeding is only a small amount, it is still important to be checked by a doctor. Note how much bleeding there is, and whether it is bright blood or old blood, and associated with any abdominal pain.

- Severe headaches, dizziness or blurred vision - Headaches which are not relieved, and associated with dizziness or blurred vision, sensations of flashing lights in front of the eyes, should be checked by a doctor immediately. This could be a sign of pregnancy-induced hypertension, which is a very dangerous form of high blood pressure.

- Seizures - Any type of seizure a woman has, whether she has had them before, necessitates that the woman visit a doctor for a check. Seizures can be very dangerous for the woman, but especially dangerous for the baby.

- Oedema – This means any swelling that is not relieved by rest and elevation of the feet. So, if the woman has a swollen face, hands and legs, then this type of oedema needs to be investigated by a doctor, as it could be a sign of blood pressure problems or heart problems.

- Breathlessness and tiredness – If a woman is unusually breathless and tired, then it is sensible that she visit a doctor. These symptoms could be signs of anaemia, asthma, respiratory infection, pulmonary embolism or a heart problem.

- Severe vomiting or diarrhoea – If a woman has severe vomiting or diarrhoea, she is at risk of dehydration and electrolyte imbalance (body lacks energy). This can very risky for both herself and her baby. Once again, she should visit a doctor for treatment.

- Severe abdominal pain – Severe pain in the abdomen can be caused by many different things but is always a sign of an acute problem. The woman should be transferred to a hospital immediately.

- Abnormal vaginal discharge – During pregnancy, women often have an increased amount of white mucous discharge from the vagina, this is normal. It is not normal for the woman to have vaginal discharge which is another colour, such as green or yellow, or that makes her feel itchy, or that smells bad. If the woman has any type of vaginal discharge which is not the normal white mucous, then she needs to visit the doctor. Abnormal discharge could be caused by a Sexually Transmitted Infection (STI) which if left untreated can cause problems with the woman's health and that of her unborn baby, the baby may even be at risk of dying. Sometimes, women confuse the premature rupture of the membranes (broken bag of waters) with vaginal discharge. If the discharge is watery, then the woman should visit the doctor to exclude rupture of the membranes, as this can be very dangerous for the baby by passing infection to the baby inside the uterus.

- Painful urination – Even though frequency of urination (emptying the bladder) is normal during times in pregnancy, emptying the bladder should not be painful. If urine smells bad, and there is pain or burning when urinating, it is likely the woman has an infection. If not treated, this infection can develop into a very severe illness, and can also cause premature birth of the baby. If a woman suspects she has an infection she should visit a doctor for treatment.

- Uterine contractions before 38 weeks – Babies are mature enough to be born after 36 weeks, but the closer they are born to full term (40 weeks) the better chance of being healthy they have. If a woman thinks she is going into labour before 38 weeks, she should make her way to a hospital immediately. Babies born too early in the pregnancy are at risk of many complications, so they need to be cared for in the hospital where they can get the treatment they will require.

- Decreased movement of the baby – The best sign a mother has of whether her baby is healthy or not is the baby's movement. When a baby moves inside the woman, he/she is telling the mother they are okay. When a woman doesn't feel her baby moving, it could be that the baby is in trouble. She should visit a doctor at the hospital immediately.

- Leaking or gushing watery fluid without labour for more than 12 hours – When the bag of waters breaks, and water leaks away from the vagina, the baby is placed at risk of infection. The woman should go to the hospital where she can be monitored for infection and the baby born safely and healthy.

- High fever – High fever is usually caused by infection and is dangerous to both the woman and the unborn baby. If a mother has a high fever, she needs to visit the doctor and receive treatment as soon as possible.

- ***Explain the common complications of pregnancy.***

Complications of pregnancy are different to warning signs and risks in that they are actually happening to the woman during her pregnancy. Pregnancy complications may be very dangerous and medical assistance should be sought immediately if a woman thinks she is developing any of these complications. It is important that women know what the signs and symptoms of complications are, so they can refer themselves to medical assistance early, and receive proper treatment.

The following is a brief discussion of common complications found during the antenatal period and how and why these complications affect the outcome of pregnancy and the health of the baby.

Anaemia –

Many pregnant women have anaemia. Anaemia occurs when the woman has a low level of red blood cells (iron) in her blood. This makes her feel tired, she looks pale, feels short of breath and may feel her heart beating rapidly. Anaemia is mainly caused by poor diet, and is called Iron Deficiency Anaemia. Women should receive iron supplements (pills) to help build up their iron levels during pregnancy. Women with anaemia may have less strength for childbirth and can be more likely to bleed heavily, become ill or even die. Anaemia in the woman is also associated with an increased risk of preterm labour, the baby can become distressed, and may even die.

Women with anaemia should be encouraged to take iron and folic acid supplements, and include high-iron and high-folic acid foods for their diets. Iron rich foods include: green-leafy vegetables, egg yokes, nuts, fish, chicken and meat.
Folic acid foods include: green vegetables, eggs, milk, beans and grain foods like bread. Tea and coffee should not be taken during pregnancy as they stop these foods being absorbed properly by the body.

Vaginal Bleeding –

Bleeding from the vagina during pregnancy is not normal and should be investigated by a doctor immediately. The only time when it is normal to pass a small amount of blood is when a small amount of pink or blood-tinged mucous comes away 2-3 days before labour begins. This is called a bloody show and tells the woman that labour will begin shortly.

If a woman experiences any of the following she must see a doctor immediately:

- Bleeding like a period at any time during pregnancy,
- Bleeding with cramps during the first 6 months – this may be a possible risk of a spontaneous abortion,
- Bleeding with constant pain at any time during pregnancy,
- Bleeding with no pain, especially in the second half of the pregnancy.

Causes of bleeding can be a spontaneous abortion, ectopic pregnancy, placenta separates from the wall of the uterus, or the placenta is lying across the opening of the uterus. Any bleeding means that the baby is compromised and is not receiving enough oxygen and nutrients, which places him/her at risk.

Never put anything in the vagina if there is bleeding,

this can cause further problems.

High Blood Pressure problems (pregnancy induced hypertension) –

High blood pressure problems are the most common medical problems seen in pregnancy. The woman must understand if she is having high blood pressure, she and her baby are at risk of developing health problems which may even lead to death. It is very important that she receive treatment from visiting a doctor.

Symptoms which the woman may have when she has blood pressure problems include:

- oedema of the face, hands and legs which doesn't go away with rest,
- headaches,
- visual disturbances (dizziness, blurring of vision, seeing spots before her eyes),
- stomach (epigastric) pain.

Women with high blood pressure in pregnancy are at a higher risk of preterm labour and having a preterm baby, poorly functioning placenta and having seizures. It is therefore important, that all women be screened for high blood pressure in pregnancy, so appropriate treatment can be provided and problems prevented.

Preterm labour and premature rupture of the membranes (bag of waters) –

Preterm labour is when the uterus starts to contract and the cervix begins to open before 37 weeks of pregnancy. Complications of this affect the baby more than the mother. The premature baby is at risk of the following complications, breathing problems and bleeding in the brain. A baby born too early can also suffer from developmental delays, vision and hearing problems, chronic lung problems, brain damage.

Risk factors for preterm labour:

1. Women with a history of preterm labour or birth.
2. Age less than 20 years of more than 35 years.
3. Twins, triplet pregnancy.
4. Women with poor weight gain.
5. Women experiencing extreme physical and psychological stress.
6. Women who are poor.
7. Women who are smokers.

8. Women who have a history of abortions or stillbirths.
9. Women who have had bleeding from the uterus during their pregnancy.
10. Women with high blood pressure.
11. Women with anaemia.
12. Women with infections.

Signs of preterm labour:

Women **always** have frequent contractions of the uterus (more than 4 in one hour). Preterm contractions do not feel as strong or as hard as in term labour. They may not hurt much until the woman's cervix is fully open and close to giving birth.
Along with contractions some women may or may not feel:

- low backache
- menstrual like cramps or very low abdominal pain
- increased pressure in the pelvic area
- increase or change in vaginal discharge-feel constantly wet or dribbling, unusually thick, pick or red in colour.
- Vaginal bleeding or spotting
- Diarrhoea
- Unable to walk

Women should be taught about these signs of preterm labour and encouraged to seek help if any of these occur during their pregnancy.

- ***Increase participants' knowledge of how to promote having a healthy pregnancy***

This session is a chance for the group to participate in a role-play. Ask the group to form 2 groups, consisting of a pregnant woman, her husband, her mother, mother-in-law and some friends. Ask one group to depict a woman who is being unhealthy during her pregnancy and the other group to depict a woman who is being healthy during her pregnancy. The group should be encouraged to act out some of the pregnancy, the advice and support they would give each woman and the end result of the pregnancy.
Materials needed:
Pillow to be used as pregnant belly
Cigarettes
Alcohol
Junk food

Healthy food
Water
Soap

Healthy Pregnancy Checklist

- Good diet consisting of fruit and vegetables (green leafy veges), proteins (meats) and fibre (breads and cereals).
- Drinking plenty of water each day – at least 2 litres per day.
- Not drinking too much tea and coffee.
- Good hygiene, washing body daily and keeping environment clean.
- No smoking, no alcohol and no drugs not prescribed by a doctor.
- Plenty of rest and sleep.
- Support from family and friends.
- Visiting the doctor at least 4 times during the pregnancy and if develops any complications or problems.
- Plan to deliver in the hospital.

- ***Explain the importance of antenatal care, and delivery in a safe environment.***

The primary objective of antenatal care is to establish contact with the women, and identify and manage current and potential risks and problems. This creates the opportunity for the woman and her health care professional to establish a delivery plan based on her unique needs, resources and circumstances. The delivery plan identifies her intentions about where and with whom she intends to give birth and contingency plans in the event of complications (transport, place of referral, etc.).

It is recommended that women attend at least four antenatal visits, ideally with the first visit early in the pregnancy, and more visits the closer to the end of the pregnancy.

Antenatal care provides the woman with information about her pregnancy and unborn baby, informing her of how the baby is growing, if she is healthy or developing complications, and can also provide her with dietary supplements in terms of vitamins and minerals, such as iron and folic acid.

If a woman does not attend a doctor for antenatal care, then risks and complications can go untreated which can leave to devastating results, such as the death of a baby or the mother. For the sake of visiting a doctor a few times in a pregnancy, surely this is worthwhile if it means the safe delivery of a healthy baby and a healthy mother.

The delivery of the baby should be planned to take place in a safe environment, conducted by trained health professionals. Plans need to be put in place early for the

transfer to the secondary health facility, so that things are not rushed when it is time to leave for the hospital. Transport should be organised, and an escort arranged.

The issue of security is acknowledged, however, in Pristina Hospital there is an Ashkalia contact person who helps arrange hospital visits and acts as an escort around the hospital campus. The maternity unit is securely controlled and very safe. Once again, a short stay in hospital (often only 24 hours if all is normal) is surely much better to ensure a safe delivery for mother and baby, than to risk a home delivery that could be wrought with complications.

- ***Explain the man's role during pregnancy.***

The man's role in pregnancy is an important issue. He has to try and give support to his wife and make a comfortable environment for the family. Contemporary society recognises a important role for the father, but the responsibility for the child rearing is still seen as largely that of the woman. Some families may disagree with this, and they are free to choose how they bring up their children. When looking at the anatomical structure of the human body, we can see the differences between male and female bodies, that is: babies cannot be created inside a man's body. However, the man's role doesn't have to be just physical, the husband can help with providing support and love to the pregnant woman; these are notions that encourage health.

It is important that the father is involved in the childbirth experience, provided the woman chooses for her partner to be involved. This is something the husband and wife should discuss during the pregnancy. It is important to acknowledge the psychological adaptations that the man has to cope with, many of which are similar to those of the woman. The man has to be open to discuss his feelings, although he may have some concerns over numerous issues, including the financial burden that a new baby can bring.

If it is suitable for both partners, it is a good idea for the husband to escort his wife to the antenatal visits at the doctor. This way, he can see the changes taking place in his wife and can play a supportive role in just being their for her and addressing her needs. The husband can ensure that his pregnant wife is getting enough rest, eating a well balanced diet and goes to the doctor for a check if she is unwell.

It is important that the relationship between the man and woman is strong. Both partners, should love and trust each other, and communicate well so they are able to make important decisions in relation to their pregnancy and the childbirth process.

- ***Assist the participants to develop a strategy for accessing antenatal care from a health professional, and transferring to a secondary health facility for delivery of their baby.***

Ask the group to list the positives and negatives of antenatal care. This will give you some idea of their opinion about antenatal care and whether they feel that it is important.
Encourage the group to develop a strategy for a pregnant woman, ensuring that she visits the doctor at least four times during her pregnancy and that transport is arranged to take her to the hospital when it is time for the baby to be born.

Reinforce to the group, the success of community participation and the effect that this can have on improving the health of the community. For example, if members of the community form a health committee, some may be responsible for arranging doctors visits for pregnant women, and act as resource people to arrange transport to the hospital when the time comes. Different people in the community with cars, may work on a roster system and be available to transport the women when necessary. Or, a telephone system may be devised that a contact person in KFOR is contacted and then arranges an escort to the hospital. This way the community are helping the women to make decisions which are going to benefit the health of herself and her baby.

Graffiti board evaluation
Ask everyone before they go for a break that they need to write one positive and one negative thing about the workshop so far on the paper by the door. For the people who cannot write, ask someone to write for them.

Session 8. Hygiene

Objectives:

- ***Explain the importance of good hygiene practices.***

Keeping the body clean helps prevent infections. If possible, both adults and children should wash their body with clean water every day. It is useful to use soap on the body as this will help to clean away dirt and germs. When a woman is pregnant it is even more important that she keep herself as clean as possible. She should bath daily and also make sure the outside of her genitals are cleaned. This will help prevent infections and illness.

It is also important to take care of your teeth, especially when pregnant. A woman can protect her teeth by eating calcium foods and avoiding sweets. She should clean her teeth carefully after every meal with a soft brush, tooth stick or finger wrapped with a piece of rough cloth. Toothpaste is good. Clean the surface of all teeth, between the teeth and under the gums. If possible a mother should try and visit a dentist at least one time during pregnancy.

Session 9. Birth Process

Objectives

- ***Provide a clear and simple explanation of the normal birth process.***
- ***Explain complications which may occur during childbirth.***
- ***Explain the importance of hygiene.***

Energizer activity: the knotty problem
Two people leave the room, the trainers. Everyone else forms a circle, holding hands and then twists the group into a knot. The trainers return, and using only voice cues (not touching) try to undo the knot. They will probably not be able to undo the knot.

Then the group starts over again, including the trainers and knots and then unknots themselves. This is much easier. This gives an example that people solve their own problems better than outsiders.

- ***Provide a clear and simple explanation of the normal birth process.***

The normal birth of a baby should take place from 38 weeks of pregnancy and onwards. The woman's body recognises it is time to deliver the baby and starts the process slowly. First time labours can take 12 –16 hours from the time contractions are strong and regular, women who have had babies before can have very fast deliveries.

Signs that labour is near

1. First babies often drop lower in the mother's belly about two weeks before birth. When this happens the mother may find it easier to breathe. If a mother had had babies before, this baby my not drop until labour begins.
2. Practice contractions get stronger or come more often. During pregnancy and labour the womb will sometimes squeeze up and become hard. This is called a contraction because the womb contracts, or gets smaller. There are tow kinds of contractions. Practice contractions occur throughout pregnancy. They are usually felt high in the belly (or all over the belly) and are mild and irregular. Many women don't even notice when they happen. Labour contractions begin closer to the time the baby is born. They are usually felt lower in the belly or back and will get much stronger that practice contractions.
3. Show appears. During most pregnancy, the tiny hole in the cervix is plugged with mucous. In the last few days of pregnancy, the cervix may begin to open. Sometimes the mucous and a little bit of blood drip out. This is called show. Show may come out all at once, like a plug, or it may leak slowly for several days. It tells you that the cervix is softening, thinning, and beginning to open. Labour will probably start in a day or two.
4. The bag of waters breaks. The bag of waters that surrounds the baby usually breaks after labour begins. If the bag breaks before labour begins, it usually means labour will start within a few hours. If labour does not start within 6 hours after the bag breaks, there is a risk of infection.
5. Stools change. Many women get loose stools (diarrhoea) before they go into labour. This helps clean out the body so the woman will be more comfortable during labour and birth.

6. The woman feels different. Sometimes a woman can feel that labour is near. She may feel dreamy, very quiet, and aware of her body. Or she may simply feel a strong urge to stay home and wait. All these feelings are normal. Sometimes women feel a strong desire to clean and rearrange their homes, this is not dangerous and is likened to a mother bird preparing her nest for the eggs whe will hatch.

What the body is doing during labour and birth

Stage 1 – the cervix opens.

During pregnancy the cervix is long, like a big toe. It is also hard, like a flexed muscle. Usually nothing can get in or out of the cervix, because the tiny hole in it is plugged with mucous to protect the baby from infection.
Since the cervix separates the baby from the vagina, it must open for the baby to be born. Towards the end of pregnancy, practice contractions begin to shorten and soften the cervix (so it can open more easily). The cervix may even open a little and the mucous plug may fall out.
When labour contractions start, they do 2 things:

1. Labour contractions push the baby's head down hard against the cervix. This helps open the cervix.
2. Labour contractions slowly pull the cervix open. Each time the womb contracts, it pulls a little bit of the cervix up, out of the vagina and into itself. In between contractions, the cervix relaxes and most of it (but not all of it) comes back into the vagina. This process continues (usually very slowly) until the cervix is completely open.

A mother's contractions must get very strong to open the cervix completely. The tiny hole must open to about 10 cms, wide enough for the baby to fit through.

Fun exercise – to lighten the mood.
Using your finger, demonstrate to the group that by feeling the tip of their nose and how hard it is, this is what the cervix feels like when a woman is not pregnant. If you ask the group to feel their ear lobe, it will feel softer, and this is how the cervix changes and gets softer closer to when the baby is going to be born.

How stage 1 labour progresses

Stage 1 labour is divided into 3 parts: light, active, and late labour.

In light labour, the contractions are usually short (about 30 seconds long) and come every 15 – 20 minutes. The contractions are often very mild. They are usually felt low in the belly, either in front or in the lower back. The contractions may hurt a little, like the cramps of monthly bleeding or of mild diarrhoea. Or the contractions may not be painful at all: they may feel more like a pressure or tightening. The mother can usually walk, talk, and even work during these contractions.

As labour continues, contractions get longer, stronger, and closer together. This is called active labour. For most women, the labour will usually become very painful. The woman will usually need to stop everything and pay full attention during a contraction. She may feel tired and need to be very still between contractions, or she may want to move about.

In late labour, the contractions may last up to 1 ½ minutes, with only 2 or 3 minutes between them. Sometimes the mother feels that the contractions never stop.

Labour patterns

Labour can follow many different patterns and still be normal:

- Some labours start with weak contractions and get strong slowly and steadily over several hours.
- Some labours start slowly and suddenly speed up.
- Some labours start strong, then get weaker, and then become strong again.
- Some labours are very light for 2 to 3 days, then suddenly get stronger and the baby comes soon after.
- Some labours follow other patterns.

All these labours are normal, as long as they get strong enough to open the cervix completely.

Stage 2 – the baby is pushed out.

Once the cervix is open, contractions can push the baby out of the womb and down the vagina. The mother can also begin to push the baby out.

Each new contraction (and push from the mother) moves the baby's head a little further down in the vagina. Between contractions the mother's womb relaxes and pulls the baby's head back up a little (but not as far as it was before the contraction).

What Stage 2 looks like.

At first, when the baby is still high in the vagina, all you can see is the mother's genitals bulging during a contraction. Her anus (butt hole) may also open a little. Between contractions, you can see her genitals relax.

After a while, you will start to see a little of the baby's head when it is pushed down during a contraction. The head will go back inside the mother between contractions. Each push will show a bit more of the head.

When the baby's head stretches the vaginal opening to about the size of the palm of your hand, the head will stay at the opening, even between contractions. This is called crowning. The mother should now stop pushing (or push very gently) so that the head can come out slowly. This will help prevent tears in the mother's genitals.

How the baby moves through the vagina

Babies change position as they move through the vagina. Most babies move like this:

1. First the baby tucks its head down, chin to chest. This makes it easier for the head to fit through the mother's bones.
2. The baby's head is squeezed and changes shape as it comes through the mother's bones. The baby turns its face toward the mother's back.
3. The baby begins to lift its chin when it gets near the vaginal opening. This is called extension.
4. The baby lifts its chin more when the head crowns.
5. The baby continues to lift its chin as the head comes out. This way the head is born smoothly.
6. The baby keeps lifting the chin until the head is born. At first, the baby's head is still turned at the neck and faces the mother's back.
7. Soon the baby's head turns part way to the mother's leg. Now the baby's face is lined up with its shoulders.
8. The the baby's whole body turns inside the mother. The baby's shoulders are now straight up and down. The baby faces the mother's leg.
9. The rest of the baby's body slips out easily.

The facilitator can use the model of the baby and uterus to show the birth process and also the pictures provided. Also use the graphic poster showing photos of the birth of a baby.

Stage 3 – the placenta is pushed out.

When the baby is first born, its cord is still connected to the placenta inside the mother. The cord will look thick, blue, and pulsing, because the baby is still getting blood from the placenta. This often gives the baby a few extra minutes to learn to breathe.

The baby can soon breathe by himself and no longer needs the placenta. Now the placenta must do 2 things: separate from the wall of the mother's womb and come out through the vaginal opening:

1. The placenta usually separates in the first few minutes after birth. There will often be a small gush of blood from the vagina. The cord will become thin, white and stop pulsing (which means the baby is no longer getting oxygen from its mother). The cord may also get a little longer. Once the cord has become thin and white it can be cut.
2. The placenta may come out right away or it may take a while. The mother's contractions (which continue for a while after birth may help push the placenta out. Or the mother may need to squat and give a little push. Often some blood

and blood clots will come out, too. The mother usually doesn't feel much pain when the placenta comes out.

The first 2 to 6 hours after birth – the womb tightens.

The place where the placenta was attached to the womb wall is called the placental site. After the placenta comes out, the placental site is like an open wound inside the mother's body. This placental site must now be closed off, or the mother will bleed too much.

The contractions that come after the birth (sometimes called 'after pains') help close off the wound by squeezing the womb tight and hard. Mothers of first babies often do not feel these pains, other mothers usually do.

The first 2 weeks after birth – the womb gets smaller.

For the first 1 or 2 days after birth, the mother may bleed as much as she would during a heavy monthly bleeding. Over the next 1 or 2 weeks, the mother should slowly bleed less – and then stop bleeding completely.

The mother's womb will slowly get smaller during the next 2 weeks. It will get almost as small as it was before she got pregnant.

If the woman has heavy bleeding and passes blood clots then she must see a doctor as there could be some placenta left behind inside the uterus. This can cause further bleeding and infection.

- ***Explain complications which may occur during childbirth.***

Even with good antenatal screening, at least 15% of women will experience complications at delivery, which may require emergency obstetric care. It is for this reason that women should make every effort to ensure that they deliver their babies in a hospital environment and not at home.

Major complications of pregnancy and delivery include haemorrhage, sepsis, high blood pressure, obstructed (blocked) labour and abortion. Although millions of women survive such complications, they often suffer life-long disabilities and ill health as a result.

Most pregnancy-related complications can be effectively prevented or managed without sophisticated technology or drugs.

Experience has shown that maternal mortality can be reduced when communities are informed about danger signs and symptoms of pregnancy and childbirth. Providing

access to essential obstetric care to all women who need it will reduce mortality and morbidity among those who experience complications.

Childbirth Complications –

Haemorrhage

Haemorrhage is excessive or uncontrolled blood loss from any blood vessels in the body. In reproductive health, it is bleeding that occurs during pregnancy or after delivery. It can result from prolonged labour, rupture of the uterus or early separation of the placenta from the wall of the uterus.

Risks for pregnant women

Factors may include a previous post-partum haemorrhage (lots of bleeding after the baby is born), previous rupture of the uterus or inverted uterus, blood clotting problems, anaemia or placenta praevia. If the labour has been induced or if it is prolonged, a woman may be at greater risk of haemorrhage.

Prolonged / Obstructed Labour

Obstructed labour can occur when a baby is too big to pass through the birth canal. Labour is considered prolonged when it continues for many hours without making progress towards delivery. This may happen if the womb is not contracting or if contractions stop.

Prolonged/obstructed labour is dangerous because it exhausts and dehydrates the woman in labour. It also increases the risk of infection and can lead to a ruptured womb.

Obstructed labour is more common in women of short height, and women with small pelvises.

Postpartum Sepsis

This is infection due to unhygienic conditions or practices during labour or delivery that occurs after the baby is born.

Causes of sepsis may be unsanitary instruments, hands or herbs introduced into a woman's body. Sepsis can also be due to prolonged labour, premature rupture of the membranes or other causes.

Signs include chills or sweats, fever, foul smelling vaginal discharge and distended abdomen.

Treatment by a doctor is essential for a full recovery.

If a woman develops any of the above complications during childbirth and is not in a hospital, she must be transferred to a hospital immediately for appropriate care. If this does not happen then both the woman and the baby may lose their lives.

- ***Explain the importance of hygiene.***

Throughout pregnancy, and especially after the baby is born, hygiene is very important for both the mother and the baby. During pregnancy, the mother should wash daily if possible, keeping her body clean and fresh to prevent any infections. After her baby is born, it is important to wash several times each day, especially if she has had stitches where an episiotomy may have been cut. The genital area must be kept clean and sanitary pads changed as often as possible. If the woman feels an increase in pain in this area, she may have an infection and she should visit her doctor.

Session 10. Postnatal period.

Objectives

- ***Provide a basic explanation of the normal post natal period.***
- ***Briefly explain any abnormal findings which may occur during the post natal period.***

- ***Provide a basic explanation of the normal post natal period.***

The period of time known as the post natal period, is the time from when the placenta is delivered to 6 weeks after the baby is born. It takes this long for the woman's body to return to the pre-pregnant state.

Many changes take place in the woman's body during this time. The uterus is returning to its pre-pregnant size, vaginal discharge changes from bright blood loss to scant white discharge and the mother is establishing her breastfeeding, which may take up to 6 weeks before she and her baby feel comfortable and have secured a good breast milk supply.

During this time, the mother will need to spend time resting and recovering from the birth of her baby, particularly if she had a difficult delivery. It is important that other family members help her to care for her new baby and other children. It is also important that the woman continues to eat a well balanced diet, and drinks plenty of fluids particularly water.

- ***Briefly explain any abnormal findings which may occur during the post natal period.***

Bleeding

During the postnatal period, it is normal to bleed like the normal monthly bleeding for up to five days. The bloody discharge then changes to a brown colour, becoming pinkish and then whitish, this change takes approximately ten days. If at any time the woman starts to have heavy bleeding, then this is abnormal and she should be taken to visit a doctor for further treatment. It is possible to have haemorrhage weeks after the baby is born.

Infection

If an infection is present in the uterus, the woman may experience fever, abdominal pain, and vaginal discharge, which smells bad. She may also have heavy bleeding. If any of these symptoms occur she must visit a doctor for treatment. It is important after delivery of the baby that the woman keeps herself clean, washing herself several times during the day when she is bleeding. Good hygiene will decrease the chances of developing infections.

Breasts

The postnatal period is when the mother establishing her breastfeeding. She and her new baby learn how to breastfeed. Occasionally, the woman may develop lumps in her breasts that can lead to Mastitis. This is an infection in the breast tissue. The best treatment for this complaint is to keep the baby feeding from the breast; this will help to clear the infection. If the woman remains unwell, she will need to visit a doctor for antibiotics to treat the infection.

Session 11. Breastfeeding

Objectives

- ***Explain the benefits of breastfeeding.***
- ***Explain how to maintain breast milk supply.***
- ***How to care for breasts while breastfeeding.***
- ***Inform participants of the importance of exclusively breastfeeding.***
- ***Common problems while breast feeding.***

- ***Explain the benefits of breastfeeding.***

Using the flipchart, ask the group to give you advantages and disadvantages of breastfeeding. Write the responses on the piece of paper. For each response give the rationale from the list below.

When describing breastfeeding, use the breastfeeding educational tool to support your explanation.

Why is breast the best?

Breastmilk is the best start in life a mother can give to her newborn baby.

Breastmilk is the perfect food for a baby:

- It has all the nutrients the baby needs.
- It is easy for the baby to digest.
- It gives the baby important protection from infections.
- It is always fresh, clean, and ready to eat.
- Sucking on the breast, close to the mother, helps the baby to feel safe.

Breastfeeding also has advantages for the mother and her family:

- It slows the mother's bleeding after birth.
- It helps prevent the mother from getting pregnant again too soon.
- It does not cost a lot of money.
- It may help to prevent breast cancer and decrease brittle bones later in the mother's life.

Baby formula or milk from other animals can be dangerous:

- It is less nutritious, especially if it not made correctly or is watered down (diluted).
- It is harder for the baby to digest.
- It will not help prevent infections.
- It can cause infections and illness in the baby if it is not made or stored correctly (if it 'goes bad').
- It can be very expensive and hard to get.
- It can cause diarrhoea (loose stools) or even death if the water or bottles are dirty.
- It requires extra clean water and fuel to boil the water and bottles. This can be bad for the whole family and community.

- ***Explain how to maintain breast milk supply.***

How to have enough milk.

Breast milk is the best and only food the baby needs for the first 6 months. To produce enough milk, the mother needs to be healthy herself. She needs to drink plenty of liquids (water), eat nutritious foods, and get enough rest.

The amount of breast milk is affected by the how much and how long the baby sucks at the breast. New babies usually breast feed every 2 or 3 hours, but sometimes will need to feed more often. Normally, the breasts make as much milk as the baby needs. If the baby empties the breasts, they begin to make more milk. If the baby does not empty them, they will soon make less milk. Therefore, the more often the baby suckles at the breast, and empties the breast of milk, the more milk the mother will have for her baby.

Note: If a mother gives her baby formula, water, or other foods, the baby will suck less at the breast, which will cause the breasts to make less breast milk.

The mother will know that the baby is getting enough breast milk if the baby wets more than 7 times, and if the baby seems healthy and gains about 200gms a week.

- ***How to care for breasts while breastfeeding.***

Care of the breasts

The new mother should try to keep her hands and nipples clean to prevent dirt and germs from getting into the baby's mouth.

A mother should try to wash her hands with soap and water before touching her nipples and before breast-feeding. She should also wash her hands after she urinates, has a bowel movement, or touches something dirty.

If she has water for bathing, she should try to clean her breasts with clean water once a day. She should not wash her nipples with soap. The nipples make a protective substance that would be removed by soap. She should never put any cream, oil, or alcohol on the nipples.

- ***Inform participants of the importance of exclusively breastfeeding.***

Breast feed as long as possible.

Babies should take **only** breast milk (no other foods) for the first 6 months. It is good to continue breastfeeding each child for at least 2 years. It is even better to breastfeed for 3 to 4 years – especially if these are no younger children. Breastfeeding takes less time, as babies get older. Most old babies and young children breastfeed less often, and they will seek out the breast themselves when they are hungry.

The World Health Organisation (WHO) recommends that babies are exclusively breastfed (only breast milk, no other fluids or food) for the first 6 months, and once other foods are introduced to their diet, that they still remain breastfeeding for at least 2 years.

The introduction of other fluids and foods too early in a baby's life can be very harmful to its health. Young babies do not need tea and coffee, and should not be given sweet drinks. Even water could be harmful if it is not clean, which could cause diarrhoea.

Feed a baby only breast milk for the first 6 months.

- ***Common problems while breast feeding.***

There are several common problems (challenges) that occur when a mother begins to breastfeed. Knowing about these potential problems can help a woman to prevent them occurring. Once again, prevention is better than cure. First time mother's usually take several weeks to feel comfortable and confident breastfeeding their new baby, it is important they receive lots of support from their husband and family to continue to

breastfeed. If a woman is having difficulties breastfeeding, she should try and talk with someone who is experienced in this area and who can offer her assistance and support.

The mother has flat or inverted nipples.

If the mother's nipples are flat or inverted (sink into the breast), the baby may have problems holding on to the breast while breast-feeding.

Babies may have the most difficulty sucking on a flat or inverted nipple during the first few days after birth, when the breasts are very full. But most babies can learn to suck well once they learn to get the nipple deep into their mouths.

These things may help the mother to attach the baby correctly to the breast:

- If the nipple is flat, the mother can gently pinch the nipple to make it stand out before giving the breast to the baby.
- If the nipple is inverted, the mother can take the breast in her hand and then pull back toward the chest. The nipples will stand up.
- If the breast is hard, the mother can milk the breast a little to help soften the nipple and help pull it out.
- The mother can try different positions, like holding the baby in the under arm position or lying down with the baby, so that its mouth does not slip off the breast.
- The mother can put a few drops of milk on the baby's lips and on her nipple to encourage the baby to suck.
- If the baby is not able to take the breast correctly after 2 days, the mother can milk her own breasts and give it to the baby by spoon. The mother should keep trying breastfeed the baby during this time. Most babies will learn to take milk from a breast with a flat or inverted nipple with time.

To prevent infection, the mother should also dry an inverted nipple well after each breast-feeding session. This helps stop any infection growing in the nipple.

The mother has swollen (engorged) breasts

Sometimes a mother's breasts get very full and hard, especially during the first few days and weeks after birth. This can be painful for the mother and make her more likely to develop a breast infection. It can make it hard for the baby to suck on the breast. If the mother begins breast-feeding the baby very soon after the birth, this may be less of a problem. If the mother's breasts do become swollen, she can:

- Breast-feed the baby more often (every 1 or 2 hours, for at least 10 minutes on each breast).
- Put warm damp cloths of the breasts for a few minutes before breast-feeding, and then apply cool cloths after breast-feeding.

- Between feedings, let the milk leak freely and support the breasts with bra or cloth.
- If the baby has trouble getting onto the breast because it is swollen, squeeze the milk out until the breast is soft enough for the baby to take.

Reassure the mother that this swelling settles down within a day or two.

<u>The mother has a breast infection (mastitis, abscess)</u>

Infection inside the breast can occur if the mother has sore, cracked nipples or full, engorged breasts; wears a very tight bra; or is over tired or in poor health. Preventing these situations will help prevent breast infection.

Signs of breast infection:
- Hot, red, sore area or lump on the breast
- Hot-to-touch, or has a fever and chills
- Body aches and pains.

If a mother thinks she may have a breast infection starting, she should:
- Keep breastfeeding frequently (every 2 hours), giving the baby the sore breast first.
- Stay in bed (and keep the baby in bed with her so it can feed often).
- Drink lots of fluids.
- Place hot, wet, and clean cloths on the sore breast for 15 to 20 minutes before each feeding. Use cold cloths between feedings to lessen the pain.
- Gently massage the sore breast before breastfeeding and while the baby is feeding, this will help clear the lump away.
- Take paracetamol for pain.

If the mother also has a fever and chills, sho should do all of the above and visit a doctor for antibiotic treatment straight away. A small amount of the antibiotic will pass through to the baby from the mother's breast milk; this will not harm the baby.

Alert!
If it feels like there is a hard, round ball in the breast that does not go away, or if the infection does not get better after the mother has been on antibiotics for 2 days, get medical help. The mother may have a breast abscess and need different treatment. An untreated abscess is very dangerous.

Evaluation
Ask each participant to write a comment on a slip of paper / or ask someone to write for them, and put it in a bag. If they have any questions they would like to ask anonymously then this is a good opportunity to do that.

Session 12. Family planning.

Objectives

- ***Define what family planning / child spacing means.***
- ***Discuss the benefits of family planning.***
- ***Explain the various family planning methods available.***
- ***Discuss the man's role in family planning.***

Warm up activity
Each person is asked to think of 5 things they like about themselves. Then they share one of these in a large group.

- ***Define what family planning / child spacing means.***

Family planning helps save women's and children's lives and preserves their health by preventing untimely and unwanted pregnancies, reducing women's exposure to the health risks of childbirth and abortion and giving women, who are often the sole caregivers, more time to care for their children and themselves.

All couples and individuals have the right to decide freely and responsibly the number and spacing of their children and to have access to the information, education and means to do so.

In terms of health risk, there is nothing more dangerous for a woman than being pregnant and delivering a child. Four factors increase the risk of pregnancy and childbearing. They are often referred to as the 'Four Toos':

- TOO young: under 18 years, girl's bodies are not yet fully developed to handle the demands of pregnancy and childbirth.
- TOO late: over 35 years, risks increase with age.
- TOO often: birth intervals of less than 2 years do not allow women to rebuild their reserves.
- TOO many children: after 4 pregnancies, risks increase for complications.

Preventing unplanned or mistimed pregnancies saves women's and children's lives. For women, it reduces their exposure to unsafe abortion or risky childbirth. By spacing pregnancies, women have more time to care for their existing children.

Even though some family planning methods have some risks that women have heard about, birth control is safer than pregnancy and childbirth. The risk of serious illness or death because of pregnancy is many times greater than the risks of any of the family planning methods discussed here.

- ***Discuss the benefits of family planning.***

Ask the group to suggest some benefits of family planning to promote discussion.
Benefits of family planning

- Woman is healthier because she has more time for her body to recover between pregnancies.
- The woman's health is not hindered by the complications of too many pregnancies and deliveries.
- Children are healthier as they are born as healthy as possible.
- Less children means less mouths to try and feed, which can be a drain on a family economically.
- Less children are easier to try and provide an education for.

- ***Explain the various family planning methods available.***

There are many different methods of family planning, some work better for some women than others. Although women are the primary users of contraceptives, it is also important for the male partner to play a role in contraceptive choice and decision-making.

It must be understood that no contraceptive is 100 % effective, not even abstinence, because people do not always abstain. A woman must be informed of the risks and benefits of each method of contraceptive and encouraged to choose a method that suits her needs. The following lists of contraceptives are those that are available and appropriate in Kosovo, other methods are not mentioned purely because they are not accessible here.

Contraception can be divided into 2 groups, natural methods and modern methods.

Provide the group with examples of the different methods, packets of pills, IUD's, and condoms. Encourage them to examine each of these samples and become familiar with them.

Natural methods

No sex.

Not having sex at all is the surest way to prevent pregnancy, but this is very difficult for couples to practice for a long time. It is usually best to use this method in combination with other methods.

Breastfeeding

Breastfeeding can delay the next pregnancy for a while, especially if ALL of the following things are true;

- The baby is less than 6 months old
- The mother gives only breast milk to the baby
- The baby does not use dummies (pacifiers) to suck on
- The mother breast feeds the baby whenever it is hungry
- The mother has not yet started her monthly bleeding again.

However, breastfeeding is not a sure protection against pregnancy. Breastfeeding women who do not want to get pregnant should use another method of contraception as well, if possible.

Pulling out / withdrawal / coitus interruptus.

In this method, a man pulls his penis out of the woman before his sperm comes. To use this method correctly, the man should wipe off any fluid at the tip of his penis before he puts it inside the woman. When he feels that the sperm is about to come, he takes his penis out and moves it away from the woman's vagina. This prevents sperm from getting inside the vagina.

Unfortunately, this method does not always work. Some men leak sperm early, and many men do not pull out before the sperm comes. This means the woman may get pregnant.

The Rhythm method – avoiding sex when a woman may be fertile.

Most women are able to get pregnant for about 8 days a month. These 8 days start 10 days after the beginning of her monthly bleeding (if she has a regular 28 day cycle). The rest of the time she cannot get pregnant, even if she has sex.

The rhythm method is one way to guess when the woman is fertile, so the couple can avoid sex during this time. For this method to work, a woman must have regular monthly bleeding that is always about 4 weeks apart.

In the rhythm method, a woman counts the days from the beginning of her last monthly bleeding to find out when she is most fertile. To use a calendar to figure out the fertile time, a woman can:

- Circle the day of the beginning of the last monthly bleeding. This is day number 1.
- Count forward 10 days from day number 1. This is day number 10.
- Put a line under day number 10 and under the next 7 days (8 days in all). These are her fertile days. She should not have sex during this time.
- If a woman does not use a calendar but can count, she can count 10 days after the first day of her monthly bleeding. She should then avoid sex for the next 8 days.

The rhythm method works best combined with checking the mucous of the vagina or with condoms. Even then, the rhythm may not work. If a woman is upset, moves, or becomes ill, she may be fertile at different times. If her partner does not care about her, beats her, or uses alcohol and drugs, he may not respect her wish to avoid sex during the fertile time.

Natural Family Planning (NFP) or Fertility Awareness Method (FAM).

Every month a woman can get pregnant only during her fertile period. Natural family planning and Fertility Awareness are similar methods, because both teach a woman how to watch her body for signs that she is fertile. In NFP, a woman must then avoid sex during her fertile time is she does not want to get pregnant. In FAM, a woman can either avoid having sex or use a barrier method (condoms) during the fertile period.

Both these methods teach a woman to watch for changes in the mucous of the vagina. Since the mucous looks and feels different during a woman's fertile period, she can tell when to avoid having sex.

To use this method, the woman takes a little mucous out of the vagina with a very clean finger everyday. She then checks to see if the mucous will stretch between her thumb and forefinger. As long as the mucous is sticky like paste and it will not stretch between her fingers, she probably isn't fertile.

When the mucous begins to get slippery or slimy or if the amount increases, it will stretch part way between her fingers. She may now be able to get pregnant.

When she can stretch the mucous between her fingers, she is probably fertile. She should not have sex until 3 or 4 days after it becomes sticky again.

Some reasons why NFP may not work:

- If a woman has a lot of discharge from the vagina, she may not be able to tell if the mucous is different during the fertile days.
- If a woman has an STI, she may have a heavy discharge from the vagina and not be able to tell if the mucous is different.
- If a woman's partner will not agree to avoid sex or use a condom during the fertile days, the woman is unprotected against pregnancy.

Because avoiding sex during the fertile period is something the woman and man must do together, watching for signs of fertility can help bring couples closer together. They can talk about how to avoid getting pregnant and how to take special care of each other during this time. But if a woman's partner will not cooperate, she may get pregnant.

Modern methods

Condoms

A condom is a narrow bag of latex rubber that the man wears on his penis while having sex. The bag traps the man's sperm so that it cannot get into the woman's womb. A condom must be used each time a couple has sex. A new condom should be used each time.

Condoms work well to prevent pregnancy. Condoms also help prevent diseases spread by having sex, including AIDS, but they are not a complete safeguard.

How to use a condom

- Condoms are usually rolled up into a ring. A new condom should be inside a small packet that has not been opened. Care must be taken when opening the packet that the condom is not torn. (If the condom is stiff, hard or feels sticky, throw it away, it will not work)
- Put on the condom when the penis is hard, but before it touches the vagina.
- Make sure the rim of the condom is on the outside, away from the penis. This makes it easier to roll down.
- Place the rolled condom over the end of the hard penis. Leave a space at the end to collect the sperm.

- Squeeze the air out of this space with your thumb and first finger. This will help to stop the condom from breaking.
- Then slowly unroll the condom down over the penis until the penis is covered.
- Right after the man comes (ejaculates) he should pull his penis out of the vagina before his penis goes soft. While he takes it out, he should hold the condom around the base of his penis to keep the condom from slipping off.
- Remove the condom from the penis carefully, tie a knot in it and put it in a rubbish bin, safely out of reach of children.

Ask the group to find a partner. Give each person in the group a condom and ask them to teach the other person how to put a condom on using the correct technique. Provide the participants with a model penis or banana. (Be sure to explain that the banana represents a penis).

Intrauterine devices (IUD's)

The IUD is a small device made of plastic and copper that a trained person puts inside the womb. Once the IUD is put inside the woman, it stays inside the womb until a trained person takes it out. Some IUD's should be replaced every year; others can stay in the womb for 5 years or more. Women must know how long their IUD can stay inside for, and then get it replaced when the time comes.

The main advantages of the IUD are that a woman does not have to remember to do anything before having sex, she cannot feel the IUD inside the womb, and the IUD is effective for a long time. Some of the disadvantages or risks of the IUD are:

- The IUD can make monthly bleeding painful, or heavier (which can cause anaemia).
- The IUD can make infections in the womb worse, which can make it hard to get pregnant later.
- The IUD can cause miscarriage, serious infection or tubal pregnancy if a woman gets pregnant while using an IUD.

For these reasons, it is best if only women who live close to health centres use IUD's. Women who have infections (vaginal or womb infections, or AIDS or HIV infections)or who are at risk of getting infections because they have many sexual partners or their husbands have many sexual partners, should not use an IUD. Also, if a woman bleeds easily or is anaemic, she should use another family planning method.

Alert

A woman with an IUD should get medical help if any of these danger signs appear;

- Late monthly bleeding (pregnancy), or unusual spotting or bleeding. A woman who gets pregnant while using IUD must have the IUD taken out straight away.
- Pain in the belly that does not go away, or pain during sex.
- Sign of infection: unusual discharge from the vagina, fever, chills, feeling ill.

- IUD string get shorter or longer, is missing, or the IUD can be felt in the vagina.
- Heavy bleeding.

Use the sample of an IUD to show the group what it looks like. Allow the participants to handle the IUD.

Birth control pills (oral contraceptives or 'the pill')

Birth control pills are made of chemicals (hormones) that are normally in a woman's body. These pills make the woman's body think that she is already pregnant, so her eggs do not come down into her womb. This means she does not have a fertile time and cannot get pregnant.

When a woman remembers to take a birth control pill every day, this method is one of the most effective ways to avoid pregnancy. But is she misses her pill for any reason, there is a risk she can get pregnant. For this reason it is good for a woman using the pill to have another family planning method on hand – just in case she does forget to take the pill once in a while.

There are two different types of pills. One type contains only one hormone (progesterone) and is called the 'mini pill', and the other type contains two hormones (progesterone and oestrogen) and is a little stronger than the single hormone pill. These pills work a little differently from each other but the basic concept is the same. It is the way in which the pills are taken that is important to make sure that they are effective in preventing a pregnancy. If a woman is breastfeeding she should only take the progesterone only pill, as the other pill can decrease the quantity and quality of breast milk.

Alert

It is important for a woman to take one pill every day – even if she is taking other medicine, eating special foods, or is ill.

How to take birth control pills.

Most pills come in packets of 21 or 28 tablets. A woman should take the pills in order – the first pill in the first row first, then the second pill in the first row, and so on. The pill should be taken at the same time each day. Some women prefer to take the pill with food, especially if they feel some nausea during the first few months on the pill.

How to take the pack of 21 pills.

A woman should count the first day of her monthly bleeding as day1. She then begins taking the first pill on day 5. She takes one pill every day until the pack is finished (21 days).

After finishing the packet, she waits 7 days before taking any more pills. Normally her monthly bleeding will be during this time. The she begins taking the pills from a new packet – one pill every day. She should begin taking the new packet of pills even if her monthly bleeding does not come.

How to take the packet of 28 pills.

A woman should count the first day of her monthly bleeding as day 1. She then begins taking the first pill on day 5. She takes one pill every day until the packet is finished (28 days). The last 7 pills are usually a different colour. Normally her monthly bleeding will occur during this time. As soon as she is finished with one packet, she starts using another packet. This way she never stops taking the pills.

During the first month on the pills the woman should use condoms, as the pills take 2 weeks before they have a contraceptive effect.

What if a woman forgets to take her pill.

If a woman forgets to take her pill for 12 hours or less, she should take the forgotten pill right away. Then she should continue taking the rest of the pills as before, even is she takes 2 pills in one day.

If a woman forgets to take her pill for more than 12 hours (but within 2 days), she should take the forgotten pill straight away. Then she should take the next pill the next day at the regular time and continue taking one pill every day. It is a good idea to use another family planning method for the next 14 days, to prevent a pregnancy occurring.

If a woman forgets to take her pill for 2 days or more in a row, she should take 2 pills right away. Then she should take her pills for the rest of the month and throw away any forgotten pills. She should also use another method of family planning or not have sex until after she gets her monthly bleeding – she may get pregnant.

Problems with the pill.

Common problems that usually go away

Women often have some of these problems when they first begin taking the pill: weight gain, breast tenderness, nausea, and unusual bleeding (spotting or bleeding at odd times, or the monthly bleeding stops). These problems usually go away in 3 months. If a woman is having problems with a certain pill, she may need to change to another kind of pill.

More serious problems.

Like all medicines, birth control pills can cause serious problems in some people. The most serious problems are blood clots. However, the chance of getting dangerous blood clots is even higher when women get pregnant than when they take the pill.

On the average, pregnancy and childbirth are many times more dangerous than taking the pill

Women who should not take the pill.

For most women, the pill is much safer than getting pregnant. However, for some women both pregnancy and birth control pills are dangerous. It is best for these women to use other family planning methods to avoid pregnancy.

A woman who has any of the following signs should **not** take birth control pills. If a woman develops one of these signs after starting the pill, she should stop and use some other method of family planning.

- A woman who thinks she may be pregnant.
- A woman who has deep or steady pain in one leg or hip. This may be caused by a vein that is tender, sore, and red (inflamed) or by a blood clot in the leg.
- A woman who had any signs of a blood clot or bleeding in the brain (stroke).
- A woman who has liver disease (hepatitis). If a woman's eyes get yellow during pregnancy or if she has had hepatitis, she should not take the pill for one year.
- A woman who has cancer (especially of the breast or womb), or who thinks she may have cancer. Birth control pills do not cause cancer, but if cancer already exists the pill can make it much worse.

Women who should get medical advice before taking the pill.

All women wanting to take the pill as a method of family planning should be checked by a doctor to make sure they are suitable for taking the pill. If a woman has any of these problems, then the pill may not be the most suitable choice for her:

- Severe headaches (migraines)
- Blood pressure above 140/90 now or during pregnancy
- Diabetes
- Chest pain or heart disease
- Difficulty breathing (asthma)
- Seizures (epilepsy)

In addition, women who smoke or are over 40 years – especially those with high blood pressure or heart problems – are also at risk if they take the pill.

Alert

If a woman taking the pill develops any of these signs, she should visit a doctor straight away.

- Abdominal pain
- Chest pain, shortness of breast or coughing up blood

- Headaches
- Any trouble seeing, blurred vision, flashing lights, not able to see
- Leg pain

Injectable contraceptives (Depo-Provera)

In this method, a woman is given an injection of a hormone (progesterone) every 3 months to keep her from getting pregnant.

The advantage of this method is that a woman does not have to remember to do anything before having sex. Injections usually work very well, and pregnancy is rare if a woman gets the injections on time. No one can see where she has the injection and no one but the woman knows she is using contraception.

The disadvantages are similar to those for birth control pills (as it is the same hormone used in the 'mini pill') – weight gain, breast tenderness, nausea, and unusual bleeding (spotting or bleeding at odd times, or the monthly bleeding stops).

When a woman stops getting injections, it may take longer than usual (as much as a year or more) for her to get pregnant. (A woman should always be told this before getting an injection). For this reason, injections are best for women who are sure they do not want to get pregnant in the next year or more.

Another disadvantage of this method, is if the woman does have problems, the effects of the Depo-Provera are in her body for 3 months, so it may take up to 3 months for the ill effects to stop.

Again, provide examples of the Depo-Provera for participants to see.

Emergency contraception

Emergency contraception is in the form of pills and can be used when a woman has sex and is not using any form of contraception and wants to prevent a pregnancy. The woman takes these pills, similar to the contraceptive pills taken daily throughout the month, but a stronger dose of these hormones.

The woman must visit a doctor to get the pills, and take the pills within 3 days of having sex. The woman will need to take 2 pills in the morning and 2 pills in the night. Because these pills contain higher amounts of hormones, some women may feel nauseated from taking the pills.

The same health check applies to a woman taking emergency contraception as it does to taking the oral contraceptive pill. If she is at risk, then she should not use emergency contraception.

After taking the emergency pills, the woman may experience some change in her monthly bleeding for that month, after this, her normal cycle should return.

Planned Abortion

For some women, abortion is the only method of family planning they are able to use. This is often due to a lack of information and understanding how their body works, and not being able to access other methods of contraceptives. When a woman has to make the decision to abort her unborn child, it is very traumatic both psychologically and physically. By educating and informing women on the methods of family planning, women can play an active role in preventing unplanned pregnancies and decreasing abortions.

A planned abortion is when a woman purposely ends a pregnancy (usually in early pregnancy) before a live baby can be born. This is often a difficult decision. Most women will need to talk about their plans, and to receive warm and caring support before, during, and after an abortion.

When abortions are done correctly in a hospital or clinic by trained health professionals, they are fairly safe. But they still have more risk than other family planning methods. It is always better to prevent pregnancy in the first place, if possible. Women need to be checked after any abortion for infection, heavy bleeding, and depression.

When abortions are done at home or by untrained persons, they can be **very** dangerous. In some places home abortions are a major cause of death for women. If a woman chooses to have an abortion, she must visit a doctor for this procedure to done safely.

- ***Explain men's role during pregnancy.***

Men play a huge role in the decision making process involved with family planning. Men should communicate with their wives, and they should agree on a method of contraception that is suitable for both parties. The man should never assume it is the woman's responsibility to ensure contraceptive measures are taken.

The man should visit the doctor with his wife and together they should collect the information relative to their decision to plan their family using contraceptive methods. They can then decide which method is suitable for them to use.

Role Play

Ask 3 members of the group to volunteer to develop a role-play about contraception. The three roles could be the wife, the husband, and the doctor. Encourage the participants to create a short role-play which will provide some information about contraceptive choices to the group.
For example, a woman and her husband go to the doctor because they want to plan their family. The husband doesn't like to use condoms, but the woman doesn't want to become

pregnant at the present time. They discuss their options with the doctor and decide on an appropriate method for the couple. The doctor should provide the couple with the advantages and disadvantages of each method of contraception, so they can make an informed choice.

Session 13. Sexually Transmitted Infections (STI's)

Objective

- ***Explain what is meant by Sexually Transmitted Infections (STI's).***
- ***Explain how STI's are spread.***
- ***Provide information on STI's signs and symptoms.***
- ***Provide information on prevention of STI's.***
- ***Explain what is HIV/AIDS.***

- ***Explain what is meant by Sexually Transmitted Infections (STI's).***

Ask the group what they know about STI's and HIV/AIDS.

Sexually Transmitted Infections are a huge public health concern. STI's are among the most common causes of illness in the world. The illness resulting from STI's continues to make large demands on the human and economic resources of communities.

STI's are infections that are passed from one person to another during sexual relations. Some common STI's are gonorrhoea, Chlamydia, Trichomonas, syphilis, herpes and HIV/AIDS.

STI's can have bad effects on the health of women, men and their children. Although STI's can hurt men and women, the problems are **worse for women.** Women often have no signs and yet they can have a serious infection inside. If a woman has an STI and doesn't receive treatment for it by a doctor it can cause the following problems:

- Unable to become pregnant (infertility)
- Baby born too soon, too small, or blind
- Baby born dead
- Pregnancy in the wrong place (ectopic / tubal pregnancy)
- Cancer of the cervix
- Death from severe infection.

Many of these problems can be prevented if treated early. Some women do not go for treatment for many reasons. The same fears, guilt, and shame a woman may feel when talking about sex make it hard for her to learn about, and understand how to prevent STI's.

A woman may fear that she will be treated badly if anyone finds out she has an STI. She may be treated badly by her husband. Even if she got the disease from her husband she may be accused of being unfaithful.

- ***How STI's are spread.***

STI's are passed from one person to another by close physical contact with someone who is already infected. Usually this is during sex. Sometimes it can happen from just rubbing an infected penis or vagina against another person's genitals.
Unborn babies can get infected through their mother's blood (Syphilis, Hepatitis B, or HIV infection), and also when the baby passes through the vagina when it is born (common with Gonorrhoea, Chlamydia and Herpes).

- ***Provide information on STI's signs and symptoms.***

Sexually Transmitted Infections.

Gonorrhoea and Chlamydia.

Both men and women can have gonorrhoea and Chlamydia without any signs. Gonorrhoea and Chlamydia have the same signs, though gonorrhoea usually starts sooner is more painful. A woman can have gonorrhoea and Chlamydia at the same time.

In a man the signs can begin as early as 2 to 5 days after he has sex with an infected person. But in a woman the signs may not begin for weeks or even months.

Signs

- Yellow or green discharge from the vagina or anus.
- Pain or burning during urination
- Pain in the lower belly
- Fever
- Pain during sex

When receiving treatment for these diseases, it is important that both partners are treated and that they use a condom when having sex until they have completed the course of treatment.

Pelvic Inflammatory disease (PID)

Pelvic inflammatory disease is a serious infection of the female organs. It is caused by germs that move up from the vagina into the womb, tubes, and ovaries. If not treated quickly, it can cause a dangerous illness right away or months later.

Causes of PID

- Untreated gonorrhoea or Chlamydia
- Infection after abortion
- Infection after childbirth

Signs

- Unusual discharge from the vagina
- Pain in the lower belly, sometimes during sex
- High fever
- Feeling ill and weak.

A woman who suspects she has PID should get to a doctor as quickly as possible for treatment.

Alert

A woman can have PID more than once. It can cause:

- A pregnancy in the wrong place (ectopic/tubal pregnancy)
- Infertility
- Chronic pain in the lower belly.

Trichomonas (trich)

This vaginal discharge does not cause PID or infertility but it is very uncomfortable and itchy. There is no pain in the belly and no fever. Men usually do not get any signs of Trichomonas but they can carry it in their penis and give it to a woman during sex. So, to get rid of it, a woman and her partner must both be treated at the same time.

Signs

- Grey or yellow discharge that is sometimes bubbly
- Bad smelling genitals
- Red and itchy genital area and vagina.

Once again, a woman and her partner need to be treated, so they must see a doctor for treatment as soon as possible.

Yeast (Candida, white discharge, fungus)

Yeast is not sexually transmitted. But it is a very common infection, because it likes to grow in warm, wet places like the vagina. It is especially common in pregnant women, women who have diabetes, or women who are taking antibiotics or birth control pills. Men can also get yeast infections.

Signs

- White lumpy, sticky discharge
- Bright red skin outside and inside the vagina that sometimes bleeds
- Itchy genitals
- Burning feeling when urinating

- A smell like mould or baking bread.

If pregnant, the woman should treat the yeast infection before the birth, or the baby can get yeast in its mouth as it is being born (thrush).
Visit a doctor for treatment.

Prevention
All women should wear underclothes made of natural fibre (like cotton) that lets air around the genitals. Wash or change the underclothes often (once a day). Do not put soap in the vagina when bathing.

Genital Ulcers

Most sores or ulcers are caused by having sex with an infected person. A single, painless sore may be a sign of syphilis. But several sores are likely to be a sign of other sexually transmitted diseases such as genital herpes.

It is important to keep any sores on the genitals clean until they are healed. If possible, wash them every day with clean water and dry carefully.

Syphilis

Syphilis is a common and dangerous disease that is spread from person to person through sexual relations. A pregnant woman with syphilis can also pass the disease to her unborn child.

Signs

- The first sign is a sore, called a chancre. It appears 2 to 5 weeks after sexual contact with a person who has syphilis. The sore may look like a pimple, a blister, or an open sore. It usually appears in the genital area of a woman or a man. This sore is full of germs, which are easily passed onto another person. The sore is usually painless, and if it is inside the vagina, a woman may not know she has it – but she can still infect others.
- The sore only lasts a few days or weeks. It then goes away by itself without treatment. But the disease continues spreading through the body.
- Weeks or months later there may be a sore throat, mild fever, mouth sores, or swollen joints, or rashes and sores on the body.

During this stage, the disease can spread through simple physical contact, like kissing or touching, because the syphilis germs are on the skin.

All of these signs usually go away by themselves, and then the person often thinks she is well. But the disease continues. Without proper treatment, syphilis can invade any part of the body, causing heart disease, paralysis, craziness and sometimes death.

The man or woman who suspects he or she may have syphilis should visit a doctor for treatment immediately.

Genital Herpes

Genital herpes is a painful skin infection caused by a virus and spread from person to person during sex. Small blisters appear on the genitals and sometimes on the mouth. You can also get herpes sores on the mouth that are not spread by sex. Children often get them.

Signs

- A tingling, itching, or hurting feeling of the skin in the genital area or thighs.
- One or more small very painful blisters, like drops of water on the skin, appear on the genitals, anus, buttocks or thighs.
- The blisters burst and form small, open sores that are very painful.
- The sores dry up and become scabs.

The first time someone gets herpes sores they can last for 2 weeks or more – with fever, headache, body ache, chills and swollen lymph nodes in the groin. There may be pain when the woman urinates.

The virus stays in the body after all the signs have gone away. New blisters can appear at any time, from weeks to years later. Usually the new sores appear in the same place. But there are not as many, they are less painful, and they usually heal faster.

A woman should always wash her hands with soap and water after touching the sores. She should also be careful not to touch her eyes. A herpes infection in the eyes is very dangerous.

Alert
A pregnant woman with herpes can pass the disease on to her baby if she has sores at the time of birth. This can cause dangerous problems for the baby. If a woman has a herpes sore when her labour begins, it is best for her to have an operation to get the baby out, especially if it is the first time she has had the infection.

- ***Provide information on prevention of STI's.***

To help prevent the spread of STI's, men and women should be encouraged to:

- **Use condoms**. When they are used correctly, condoms can help prevent the spread of sexually transmitted diseases, including AIDS.
- **Be careful whom they have sex with**. It is best to have sex with one faithful partner.
- **Not have sex with anyone who has many sex partners** or with anyone who injects illegal drugs.

- **Treat STI's early.** This will protect them from more serious problems later on, and will prevent the spread of infection to others. They should not wait until they are very ill.
- **Help their partners to get treated when they do.** Encourage them to take proper medicine, or to see a doctor.
- **Make sure to take all the medicine,** even if the signs start to go away. Remind them that they will not be cured until all the medicine is finished.
- **See a doctor, or go to a hospital, if they do not feel better soon.**
- **Not have sex with a man who has a rash, sores, or a discharge from his penis, or burning when he urinates.**
- Go to a clinic or hospital to be checked if they have had sex with a man or a woman who they think has an STI (even if the women do not have any signs).

- ***Explain what is HIV/AIDS (Acquired Immune Deficiency Syndrome)***

AIDS is also a sexually transmitted disease caused by a virus (HIV). It is spread when blood, wetness from the vagina, or semen of someone already infected with the AIDS virus gets into the body of another person. It can be spread through:

- sex with someone who has the AIDS virus
- using the same needle of a syringe (or any instrument to cut the skin) without sterilizing it.
- An infected mother to her unborn child
- Blood transfusions – it the blood is not tested to make sure it is free from the AIDS virus.

AIDS is a condition that affects a person's immune system. It is caused by Human Immunodeficiency virus (HIV). When someone is diagnosed with AIDS, it means that the virus has destroyed that person's immune system to the point that they are no longer able to fight off illnesses.

Symptoms commonly experienced by people with AIDS include fevers, night sweats, diarrhoea, weight loss, extensive herpes sores, and eventually dementia and death.

There is no cure for HIV/AIDS. Women can get HIV/AIDS more easily than men during sexual relations. STI's that cause sores can make it easier to get HIV/AIDS, because the virus can get into the body through the open sores. **A woman can get HIV/AIDS from someone who looks completely healthy.**

Prevention

To prevent getting HIV/AIDS a woman should;

- Not have sex with an infected person, unless he uses condoms

- Use condoms with any new sex partner. He may have HIV/AIDS, without having any of the signs.
- Not share toothbrushes or sticks, syringes, needles, or other instruments that are not sterile. This includes the instruments used for piercing ears, acupuncture, tattoos, scarring, or circumcision. Any time the skin is cut or pierced, it should only be done with equipment that has been sterilised.

Ask the group to give some ideas to help prevent the spread of sexually transmitted diseases in their community.

Community responses might be:

- Find out from the local health clinic / Department of Health, what STI's are most common in your community and what medicines work best to treat them.
- Find out what medicines you can get in your community to treat STI's and how much they cost.
- See if it is possible to start a community pharmacy so that it will be easier for people to get medicines and condoms.
- Organise a group to talk about health topics, including HIV/AIDS and STI's.
- Help parents understand that teaching children about STI's and AIDS, helps them to make safe choices later on when they start having sex.

<u>Hepatitis B</u>

Hepatitis B is also a dangerous infection, caused by a virus that attacks the liver. It spreads very easily from one person to another, especially during sex. Hepatitis B is spread when the blood, spit, wetness form the vagina, or sperm of someone already infected with the virus gets into the body of another person.

Hepatitis B can be transferred in the same ways as HIV/AIDS:

- By having sex with an infected person
- By sharing injection needles or syringes with an infected person
- From an infected mother to her unborn child
- From blood transfusions – if the blood is not tested to make sure it is free from hepatitis.

Signs

- Fever
- No appetite
- Tired and weak feeling
- Yellow eyes and sometimes yellow skin
- Pain in the belly
- Urine the colour of Coca-cola, and stools that look whitish
- No signs at all

If a woman has some of these signs while she is pregnant, see a doctor straight away. She may be able to get a vaccination for the baby to prevent it getting hepatitis B.

If a woman's husband or partner has had some of these signs, she should not have sex with him until he is completely well.

There is no medicine that will help. Most people get better from hepatitis B. Resting, eating foods that are easy to digest, and not having any alcohol will make the person feel better.

Evaluation
Toss a ball around and ask the following questions or have the participants ask each other:
What did you learn today?
What will you use in your work?
What would you change to improve the activities we have done so far?
What did you enjoy?

Session 14. Sexual and Gender-based Violence.

Objectives:

- ***Familiarise participants with the many facets of sexual violence against women and girls.***

Violence against women is not a private issue, not just a women's issue. This issue concerns the public, men and the society at large. The threat of violence shadows women not only in the context of war, but in times of peace, in their daily lives, in the home, on the streets and in the workplace. Violence against women in all its forms is a grave violation of women's human rights. It affects women's capacity to realise their full human potential and be active agents in change and development.

It is known that a woman's vulnerability to violence is increased if she is uneducated and poor. Interestingly, the World Bank has calculated "that violence against women is as serious a cause of death and incapacity among women of reproductive age as cancer, and a greater cause of ill-health than traffic accidents and malaria combined."

This session focuses on sexual violence against women. Most reported cases of sexual violence amongst refugees involve female victims and male perpetrators. It is acknowledged that men and young boys may also be vulnerable to sexual violence, particularly when they are subjected to detention and torture.

Violence against women, in its multiple forms, is increasingly recognized by individuals and states as a global problem and a serious violation of women's human rights. Violence by partners and /or family members affects women in many different ways. In particular it has consequences for mental and physical health, as it leads to stress, depression, loss of self-esteem, reluctance to relate to the wider world as well as more severe psychological or physical problems.

There are various forms of sexual violence. Rape, the most often cited form of sexual violence, is defined in many societies as sexual intercourse with another person without his/her consent. Rape is committed when the victim's resistance is overwhelmed by force or fear or other coercive means. However, the term sexual and gender-based violence encompasses a wide variety of abuses that includes sexual threats, exploitation, humiliation, assaults, molestation, domestic violence, incest, involuntary prostitution, torture and attempted rape.

Since perpetrators of sexual and gender-based violence are often motivated by a desire for power and domination, rape is common in situations of armed conflict and internal strife. An act of forced sexual behaviour can threaten the victim's life. Like other forms of torture, it is often meant to hurt, control and humiliate, while violating a person's physical and mental integrity.

Sexual and gender-based violence has acute physical, psychological and social consequences. Survivors often experience psychological trauma: depression, guilt, terror, shame, loss of self-esteem. They may be rejected by spouses and families, ostracised, subjected to further exploitation or to punishment. They may also suffer from unwanted pregnancy, unsafe abortion, sexually transmitted infections, and infertility.

It is important that society does not tolerate any form of sexual and gender-based violence and that it supports the victims of such violence. Communities should be encouraged to collaborate and develop strategies to support a violence free environment.

Facilitate an open discussion. Proceed slowly and allow participants plenty of time to air their views. Summarise the key points points on paper.

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